REMOVAL ASSESSMENT REPORT

FOR

CACTUS PIPE SPLP SAMPLING
SOUTH FIELDSPAN ROAD
DUSON, LAFAYETTE PARISH, LOUISIANA

Prepared for

U.S. Environmental Protection Agency Region 6
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Contract No. EP-W-06-042
Technical Direction Document No. TO-0005-07-08-01
WESTON Work Order No. 20406.012.005.0211.01
NRC No: N/A
CERCLIS No. LA0000605278
FPN: N/A
EPA OSC: Warren Zehner
START-3 PTL: Robert Sherman

Prepared by

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EXECUTIVE SUMMARY

Weston Solutions, Inc. (WESTON®), the U.S. Environmental Protection Agency (EPA) Superfund Technical Assessment and Response Team (START-3) contractor, was tasked by EPA Region 6 Prevention and Response Branch (PRB) under Contract Number 68-W-06-042, Technical Direction Document (TDD) No. TO-0005-07-08-01 to collect three samples for analysis of total lead and Synthetic Precipitation Leaching Procedure (SPLP) lead at the Cactus Pipe site located near Duson, Lafayette Parish, Louisiana. The Cactus Pipe site was an oilfield pipe services company that operated from 1971 to 1995. The TDD was subsequently amended to include collection of twenty additional samples for total lead analysis and five additional samples for SPLP lead analysis. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Number assigned to the site is LA0000605278.

The purpose of the sample collection was to determine if site soils were below state regulatory SPLP levels to assist in determining an appropriate cleanup level for the pending removal action. START-3 collected the samples on 30 August and 1 October 2007. The analytical results indicated that site soils near the proposed cleanup level should meet the requirements of the Louisiana Department of Environmental Quality (LDEQ) Risk Evaluation/Corrective Action Program (RECAP) screening standards for lead. The detailed analytical results are presented in this report.

☐ The EPA Task Monitor did not provide final approval of this report prior to the completion date of the work assignment. Therefore, Weston Solutions, Inc. has submitted this report absent the Task Monitor's approval.

☒ The EPA Task Monitor has provided final approval of this report. Therefore, Weston Solutions, Inc. has submitted this report with the Task Monitor's approval.

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1. INTRODUCTION

Weston Solutions Inc. (WESTON®), the Superfund Technical Assessment and Response Team (START-3) contractor, was tasked by the U.S. Environmental Protection Agency (EPA) Region 6 Prevention and Response Branch (PRB) under Contract Number EP-W-06-042, Technical Direction Document (TDD) TO-0005-07-08-01 (Appendix E) to collect three samples for analysis of total lead and Synthetic Precipitation Leaching Procedure (SPLP) lead at the Cactus Pipe site located near Duson, Lafayette Parish, Louisiana. The TDD was subsequently amended to include collection of twenty additional samples for total lead analysis and five additional samples for SPLP lead analysis. A Site Location Map is provided as Figure 1-1, and a Site Area Map is provided as Figure 1-2. All figures are provided as separate portable document format (PDF) files. START-3 prepared this removal assessment to describe the technical scope of work that was performed.

1.1 PROJECT OBJECTIVES

START-3 has provided technical assistance to EPA Region 6 for performing a removal assessment and to collect data necessary to support EPA's determination that the Cactus Pipe site presents a threat to public health or welfare of the United States or the environment in accordance with *40 Code of Federal Regulations (CFR) 300.415*.

The primary objective of this removal assessment was to collect and analyze soil samples to determine an appropriate cleanup level pursuant to applicable regulations within the state of Louisiana.

1.2 REPORT FORMAT

This report has been organized in the following format:

- Section 1 – Introduction
- Section 2 – Site Background
- Section 3 – Actions Taken
- Section 4 – Summary of Analytical Results
- Section 5 – Disposal Information

2. SITE BACKGROUND

Information regarding site location, description, and site history are included in the following subsections.

2.1 SITE LOCATION AND DESCRIPTION

The Cactus Pipe site is located on South Fieldspan Road (Louisiana Highway 724), approximately 1.5 miles south of U.S. Highway 90 near Duson, Lafayette Parish, Louisiana. The geographic center of the site is Latitude 30.218611° North and Longitude 92.141111° West, as scaled from the United States Geological Survey (USGS) Duson Quadrangle, 7.5-minute series topographic map. The map scale is 1:24,000 and is in the North American Datum of 1927 (NAD-27). The site is bordered to the north by a residential home and livestock grazing land and to the south by commercial property. The site is also bordered by South Fieldspan Road and agricultural land to the west and livestock grazing land to the east.

The Cactus Pipe site consists of two parcels of land. The northern parcel of land is 13.76 acres in size, and the southern parcel is 6.765 acres in size. The southern parcel was remediated prior to being sold to Mr. Pomier, and this parcel currently consists of an open field that is maintained by the owner. A drainage ditch flows north through both parcels of the site. Another drainage ditch flows north along the eastern boundary of the site. Both drainage ditches flow into another ditch along the northern boundary of the site that flows to the east.

The northern parcel is where most of the site activities took place. The site includes six structures and numerous areas where other structures once stood. Numerous drums are scattered throughout the site, including a “drum pile” near the eastern edge of the site. Two soil piles are located on the site: one near the southern edge of the northern parcel (P1), and one near the eastern end of the site (P2). Both soil piles have signs posted warning of a radiation hazard; however, a radiation scan of the site indicated that only P1 contained radiation levels above background.

Other areas on the site shown on the site sketch (Figure 2-1) include a former casing cutter area (A1), a fuel storage area (A2), a former machine shop (A3), a front casing hydrotesting area (A4), a rear casing hydrotesting area (A5), a casing inspection area (A6), a vehicle maintenance area (A7), and two drum storage areas (A8 and A9).

2.2 SITE HISTORY

The facility began operations as a pipe yard in 1971 under the name Cactus Pipe and Supply (CPS), owners of the entire 20.525 acres. Site operations included cleaning, threading, and distributing drill pipe for oilfield use. In 1978, CPS sold the 6.765-acre parcel to Grey Wolf Drilling. In 1980, GEO International (GEO) purchased CPS, and CPS continued to operate as a subsidiary of GEO. In 1982, GEO conveyed the land to CPS. CPS changed its name to GEO Pipe Company (GPC) in 1992. The facility ceased operations in March 1995 when GEO and GPC went into bankruptcy. On 15 May 1995, GEO abandoned the 13.76-acre parcel of land under Chapter 11 of Title 11 of the United States Code. The 6.765-acre parcel of land was purchased from Grey Wolf by Mr. John Pomier in May 1999. Mr. Pomier is the current owner of the land. Mr. Pomier operates American Waste Water Systems on property adjacent to the 6.765-acre parcel.

2.3 SUMMARY OF PREVIOUS INVESTIGATIONS

In 1989, Newpark Environmental Services (NES) conducted a Phase I Assessment of the Cactus Pipe facility. In 1990, NES conducted a Phase II Assessment that included collection and analysis of soil samples. Eight composite samples were analyzed for ignitability, corrosivity, reactivity, and extraction procedure toxicity (EP Tox). No sample was ignitable, corrosive, or reactive. All eight samples contained some concentration of EP Tox metals; however, the only analyte with a concentration in excess of a regulatory level was lead in six of the eight samples. No samples were analyzed for total concentration of lead.

In 1990, CPS conducted a NORM survey during which samples were collected from soil piles and the tube cleaning area. Analysis of the samples indicated that site soils were contaminated with Naturally Occurring Radioactive Materials (NORM).

In April 2000, the Superfund Technical Assessment and Response Team (START) contractor was tasked by the EPA Region 6 Response and Prevention Branch (RPB) to conduct a Preliminary Assessment at the Cactus Pipe site under TDD No. S06-99-12-0002.

In 2004, START-2 conducted a removal assessment of the site including radiation screening, in-situ screening of site soils with an X-Ray Fluorescence Spectrometer (XRF), and collecting soil samples for laboratory analysis of metals. START-2 determined the extent of contamination for both lead and NORM, and performed calculations estimating the volume of soils that would have to be removed based on cleanup levels of 500 milligrams per kilogram (mg/kg) of total lead and 5 Pico Curies per gram (pCi/g) of Radium.

In 2007, START-3 gathered site-specific information and prepared a Form UIC-23 waiver for the classification of certain waste streams as Non-Hazardous Oilfield Wasted (NOW waste) under Louisiana Department of Natural Resources (LDNR) regulations.

3. ACTIONS TAKEN

In preparation for removal assessment field activities, START-3 prepared a Health and Safety Plan (HASP) as well as a Quality Assurance Sampling Plan (QASP) (Appendix A) that was approved by the EPA On-scene Coordinator (OSC). The removal assessment field activities were conducted on 30 August, 28 September, and 1 October 2007.

On 30 August 2007, START-3 mobilized to the site with brush-clearing equipment and sampling equipment. START-3 located the grid node markers from the 2004 START-2 assessment and re-created three grids. START-3 collected three composite soil samples and one duplicate (Figure 3-1) and delivered the samples to an analytical laboratory for total lead and SPLP lead analysis.

Upon reviewing the results of the first sampling mission, EPA OSC Zehner tasked START-3 to collect additional soil samples. START-3 drafted an addendum to the QASP (Appendix A) and procured additional analytical services. On 28 September 2007, START-3 returned to the Cactus Pipe site to re-create additional grids in preparation for sampling. On 1 October 2007, START-3 collected 20 composite soil samples and two duplicates (Figure 3-2). START-3 delivered the samples to the analytical laboratory. The 20 composite soil samples plus the two duplicates were analyzed for total lead, and five of the samples plus one duplicate were analyzed for SPLP lead.

4. SUMMARY OF ANALYTICAL RESULTS

Soil samples were collected from 23 grids for laboratory analysis. Sample results are presented in Table 4-1, and shown graphically on Figure 4-1. The Analytical Data Validation is presented in Appendix D. Analytical results indicated total lead concentrations below the proposed cleanup level of 1400 mg/kg in 12 of the grids, while lead concentrations were above 1400 mg/kg in 11 of the grids. Soil samples collected from eight of the grids were analyzed for SPLP lead. Analytical results indicated SPLP lead concentrations above the Louisiana Department of Environmental Quality (LDEQ) Risk Evaluation/Corrective Action Program (RECAP) screening standard of 0.3 mg/L in one of the grids, while lead concentrations were below 0.3 mg/L in seven of the grids.

Table 4-1
Summary of Analytical Results for Cactus Pipe SPLP Sampling
(August 30 and October 1, 2007)

August 30, 2007 Analytical Results		
Grid	**Total Lead (mg/kg)[(1)]**	**SPLP Lead (mg/L)[(1)]**
grid B4	785	0.12 JK
grid B5	710	0.095
grid C6	**3930**	**1.61**
grid X4 (duplicate of B4)	768	NA
October 1, 2007 Analytical Results		
Grid	**Total Lead (mg/kg)[(1)]**	**SPLP Lead (mg/L)[(1)]**
grid A1	760	NA
grid A13	**3310**	NA
grid A9	**1790**	NA
grid B11	801	NA
grid B6	660	NA
grid B7	**4370**	NA
grid C1	**1990**	0.12
grid C9	**2140**	NA
grid D1	1220	NA
grid D11	**4000**	NA
grid D4	1040	NA
grid D6	547	NA
grid D8	**1540**	0.077 JK
grid E11	**3240**	NA
grid E7	**1560**	NA
grid F3	1050	NA
grid F6	1080	NA
grid F8	**3420**	0.14
grid F9	1200	NA
grid G6	912	0.033
grid X2 (duplicate of D8)	1310	0.032 JK
grid X3 (duplicate of D4)	1020	NA

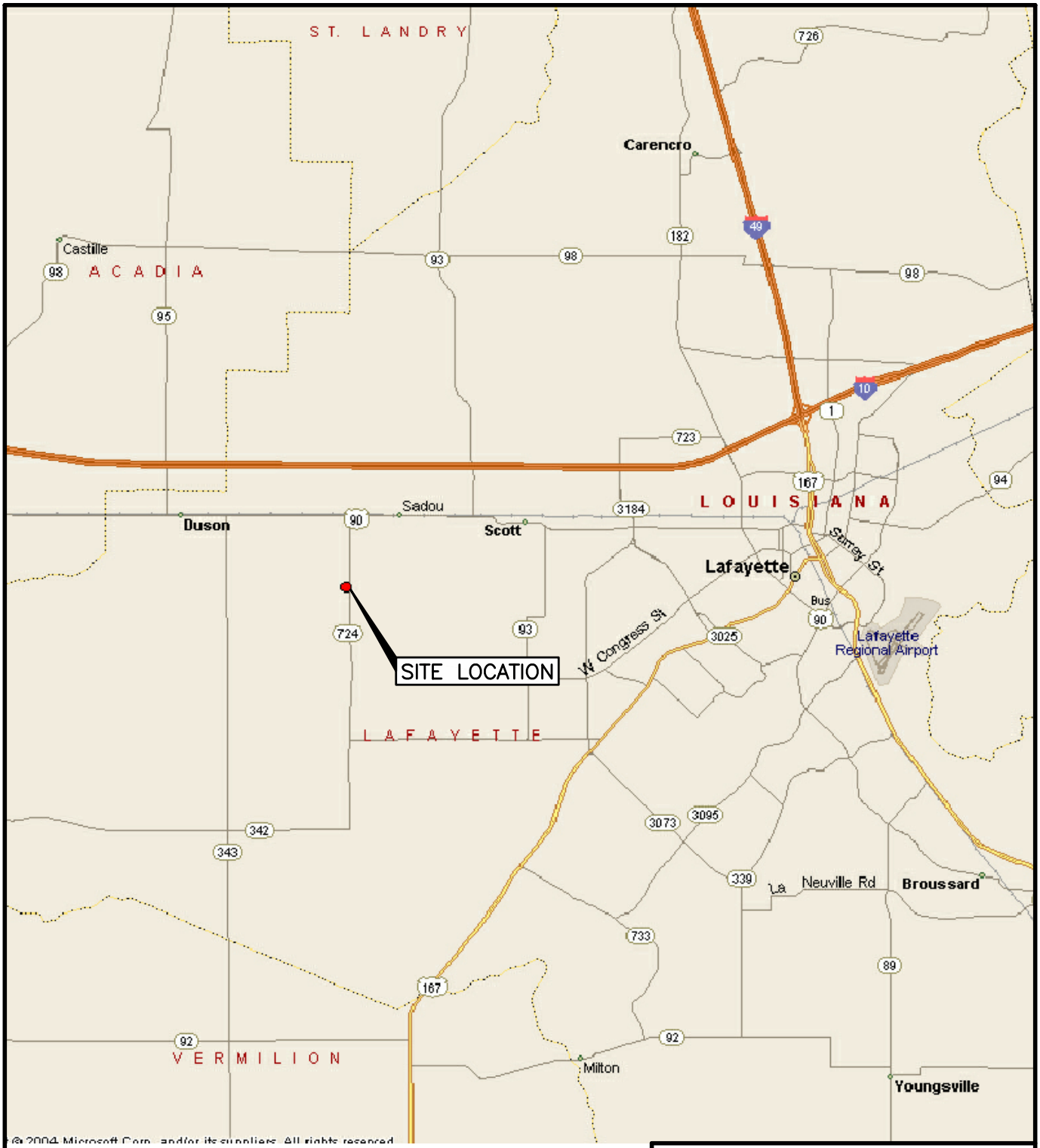
[(1)] Detected concentrations that exceeded the industrial Risk Evaluation/Corrective Action Program Screening Standards (RECAP SS October 2003) are bolded.

Key:
mg/kg = Milligrams per kilogram
mg/L = Milligrams per liter
NA = Not analyzed
SPLP = Synthetic Precipitation Leaching Procedure

Data Qualifiers:
J = The analyte was analyzed for, but the associated numerical value may not be consistent with the amount actually present in the environmental sample or may not be consistent with the sample detection or quantitation limit. The value is an estimated quantity. The data should be seriously considered for decision-making and are usable for may purposes.
K = Unknown bias

5. DISPOSAL INFORMATION

Based on the analytical results of the samples collected under this TDD, as well as the information gathered during previous site assessments, START-3 has calculated estimated volumes of materials to be excavated during the proposed removal at the Cactus Pipe site. Based on the proposed action level of 30 pCi/g of NORM, an estimated 1,500 cubic yards of soil would need to be excavated and sent for off-site disposal. Based on the proposed action level of 1,400 mg/kg of total lead, approximately 101,300 square feet of soil would require excavation, and approximately 2,200 cubic yards of material would need to be transported offsite for disposal. Some of the soil excavated for NORM contamination will also contain lead above the 1,400 ppm cleanup level; however, Toxicity Characteristic Leaching Procedure (TCLP) samples collected during the 2004 START-2 site assessment were all below regulatory limits, and the soils would not require disposal in a hazardous waste landfill.



SOURCE: MICROSOFT STREETS 2005.
CERCLIS: LA0000605278
TDD No.: TO-0005-07-08-01

US EPA REGION 6
START-3

FIGURE 1-1
SITE LOCATION MAP
CACTUS PIPE SPLP SAMPLING
SOUTH FIELDSPAN ROAD
DUSON, LAFAYETTE PARISH, LOUISIANA

DATE:	W.O. #	SCALE:
JUN 07	20406.012.005.0211.01	NOT TO SCALE

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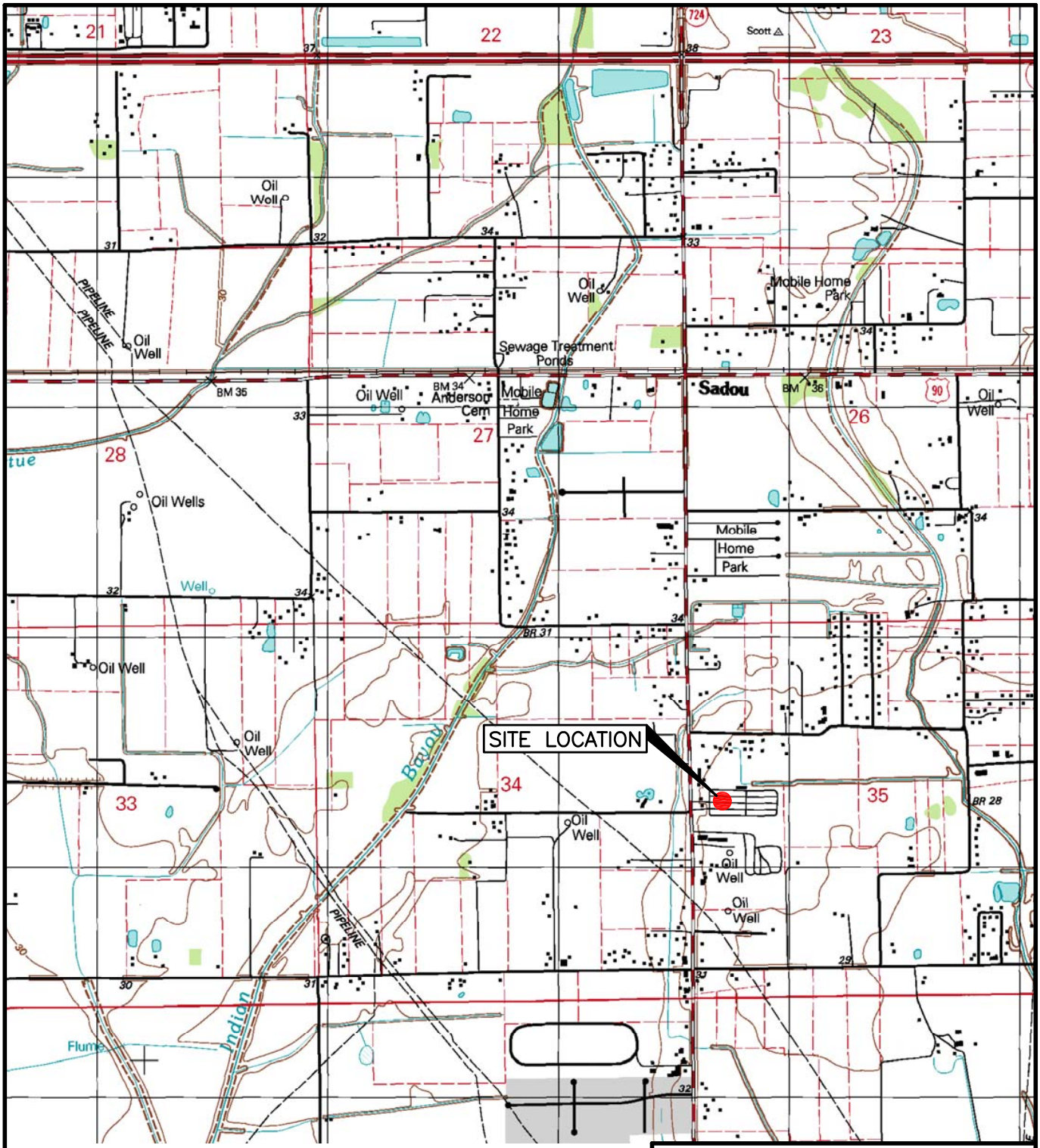

SOURCE: USGS 7.5 MINUTE SERIES TOPOGRAPHIC, DUNSON, LOUISIANA (1998).
CERCLIS: LA0000605278
TDD No.: TO-0005-07-08-01

US EPA REGION 6
START-3

FIGURE 1-2
SITE AREA MAP
CACTUS PIPE SPLP SAMPLING
SOUTH FIELDSPAN ROAD
DUSON, LAFAYETTE PARISH, LOUISIANA

DATE:	W.O. #	SCALE:
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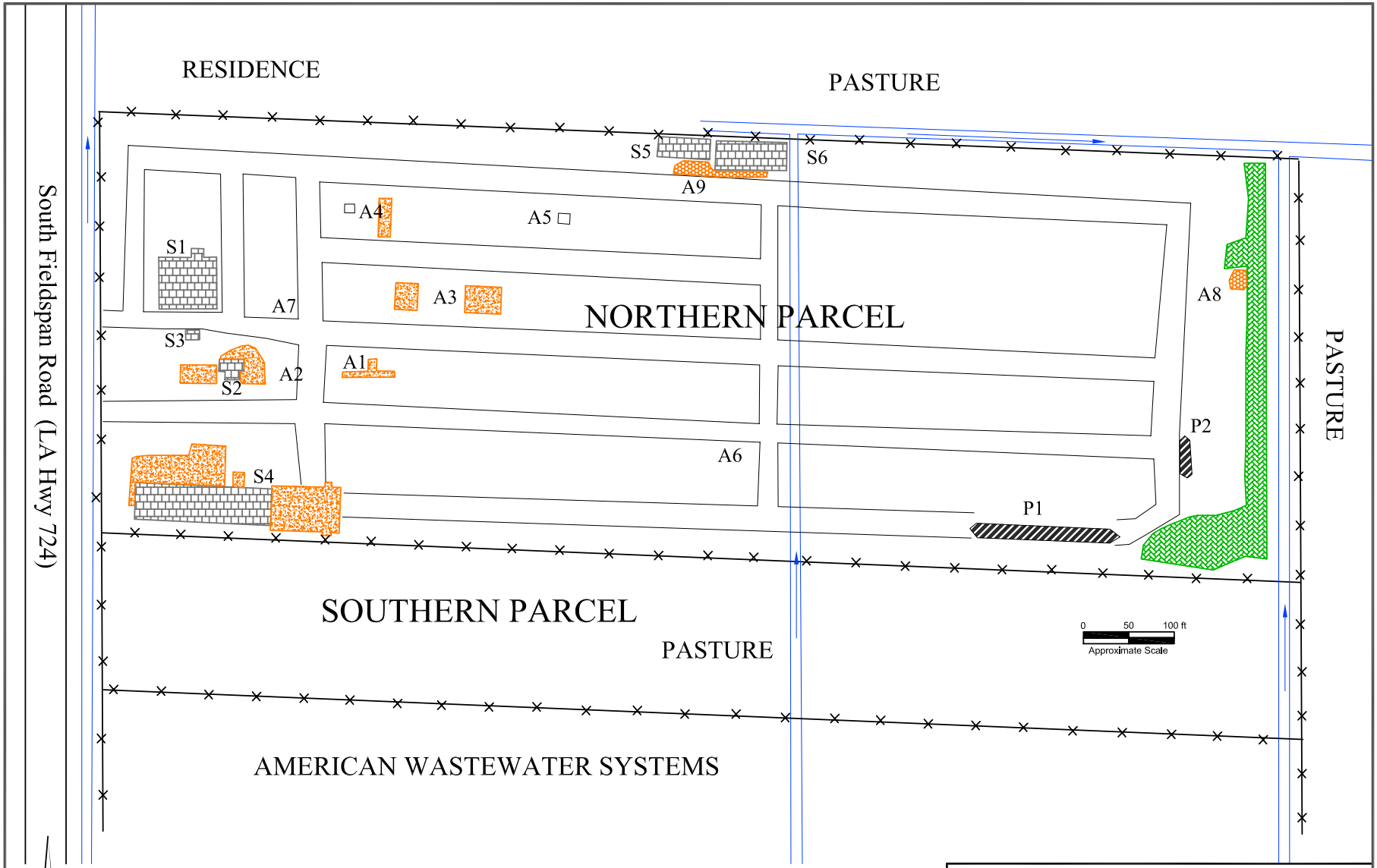


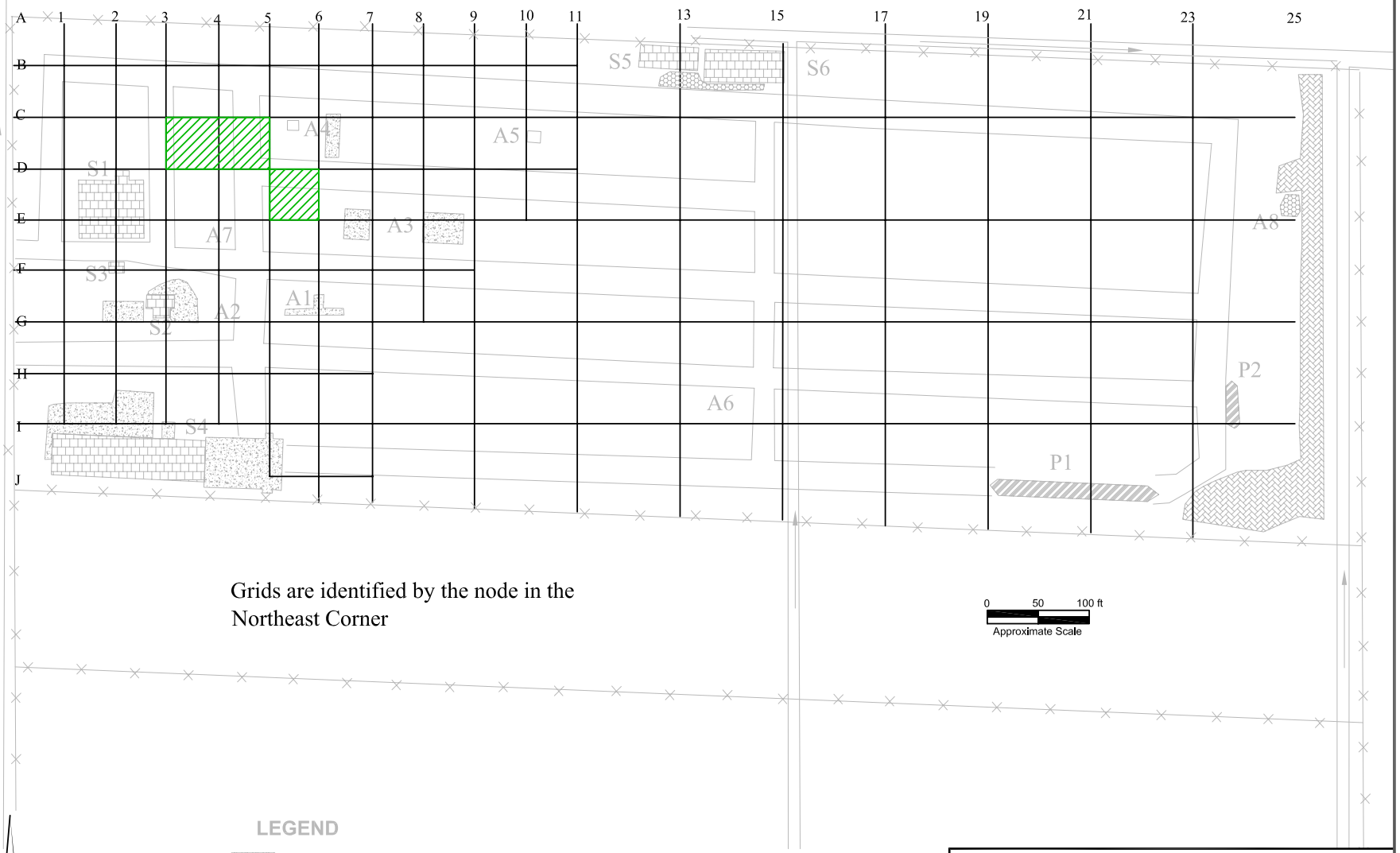
SOURCE: TTEMI
TDD NO.: TO-0005-07-08-01
CERCLIS NO.: LA0000605278

US EPA REGION 6
START-3

FIGURE 2-1
SITE SKETCH

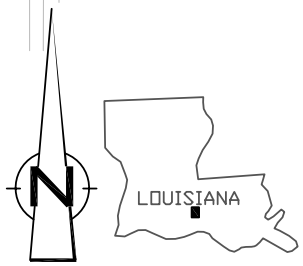
CACTUS PIPE SPLP SAMPLING
SOUTH FIELDSPAN ROAD
DUSON, LAFAYETTE PARISH, LOUISIANA

DATE:	W.O. #	APPROX. SCALE:
AUG 07	20406.012.005.0211.01	AS SHOWN



LEGEND

- TREES
- BUILDINGS
- CONCRETE
- SOIL PILE
- GRIDS SAMPLED ON 30 AUGUST 2007
- SITE ROADS (SHELL/GRAVEL)
- A6 SITE AREA (NUMBER)
- S4 SITE BUILDING (NUMBER)
- FENCE
- B 11 GRID LINES (NUMBER/LETTER)
- DRAINAGE DITCH & FLOW DIRECTION
- DRUM PILES

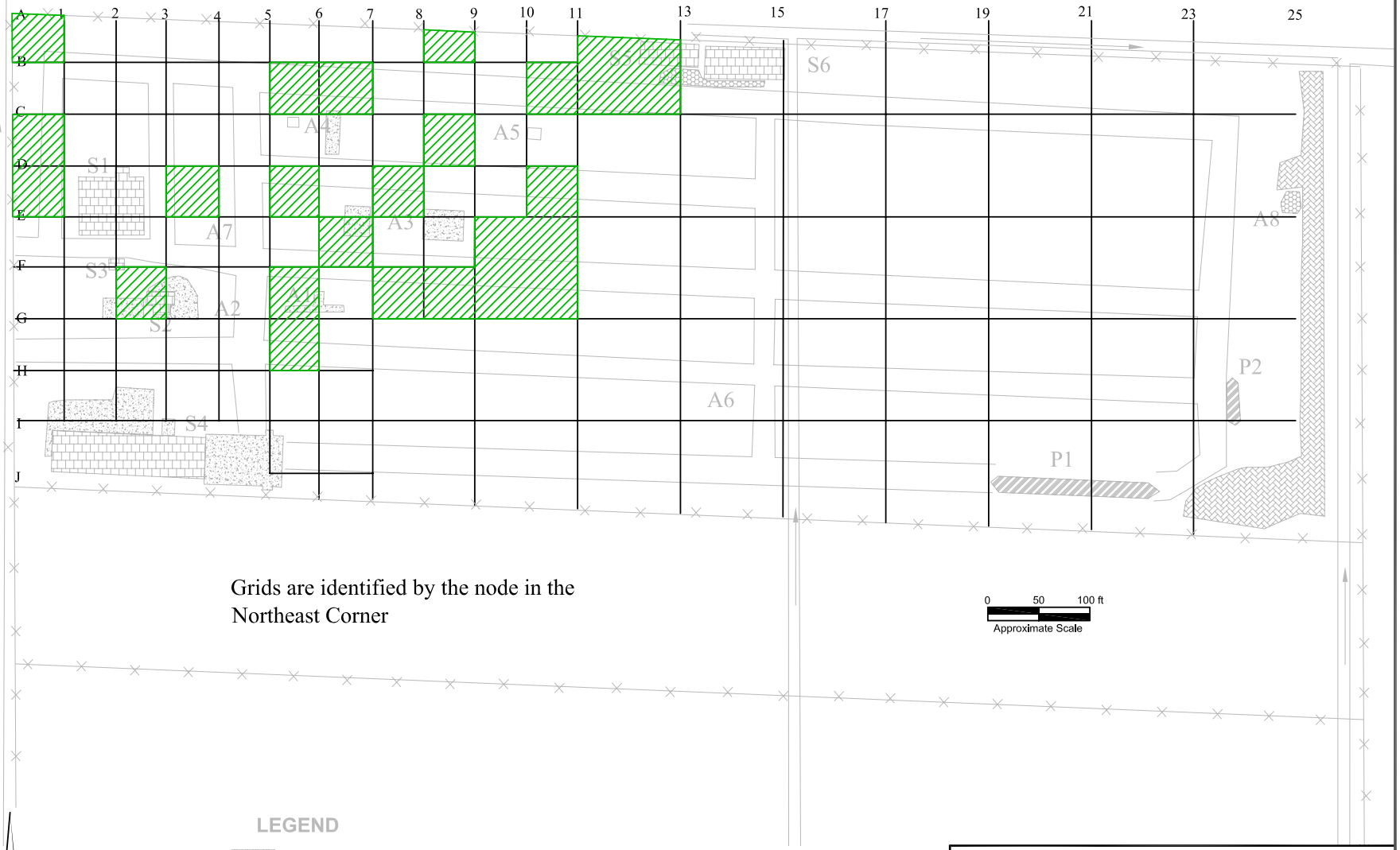


SOURCE: TTEMI
TDD NO.: TO-0005-07-08-01
CERCLIS NO.: LA0000605278

US EPA REGION 6
START-3

FIGURE 3-1
SAMPLE LOCATION MAP
30 AUGUST 2007
CACTUS PIPE SPLP SAMPLING
SOUTH FIELDSPAN ROAD
DUSON, LAFAYETTE PARISH, LOUISIANA

DATE:	W.O. #	APPROX. SCALE:
AUG 07	20406.012.005.0211.01	AS SHOWN



LOUISIANA

SOURCE: TTEMI
TDD NO.: TO-0005-07-08-01
CERCLIS NO.: LA0000605278

LEGEND

- TREES
- BUILDINGS
- CONCRETE
- SOIL PILE
- GRIDS SAMPLED ON 1 OCTOBER 2007
- SITE ROADS (SHELL/GRAVEL)
- A6 SITE AREA (NUMBER)
- S4 SITE BUILDING (NUMBER)
- FENCE
- 11 / B GRID LINES (NUMBER/LETTER)
- DRAINAGE DITCH & FLOW DIRECTION
- DRUM PILES

US EPA REGION 6
START-3

FIGURE 3-2
SAMPLE LOCATION MAP
1 OCTOBER 2007
CACTUS PIPE SPLP SAMPLING
SOUTH FIELDSPAN ROAD
DUSON, LAFAYETTE PARISH, LOUISIANA

DATE:	W.O. #	APPROX. SCALE:
AUG 07	20406.012.005.0211.01	AS SHOWN

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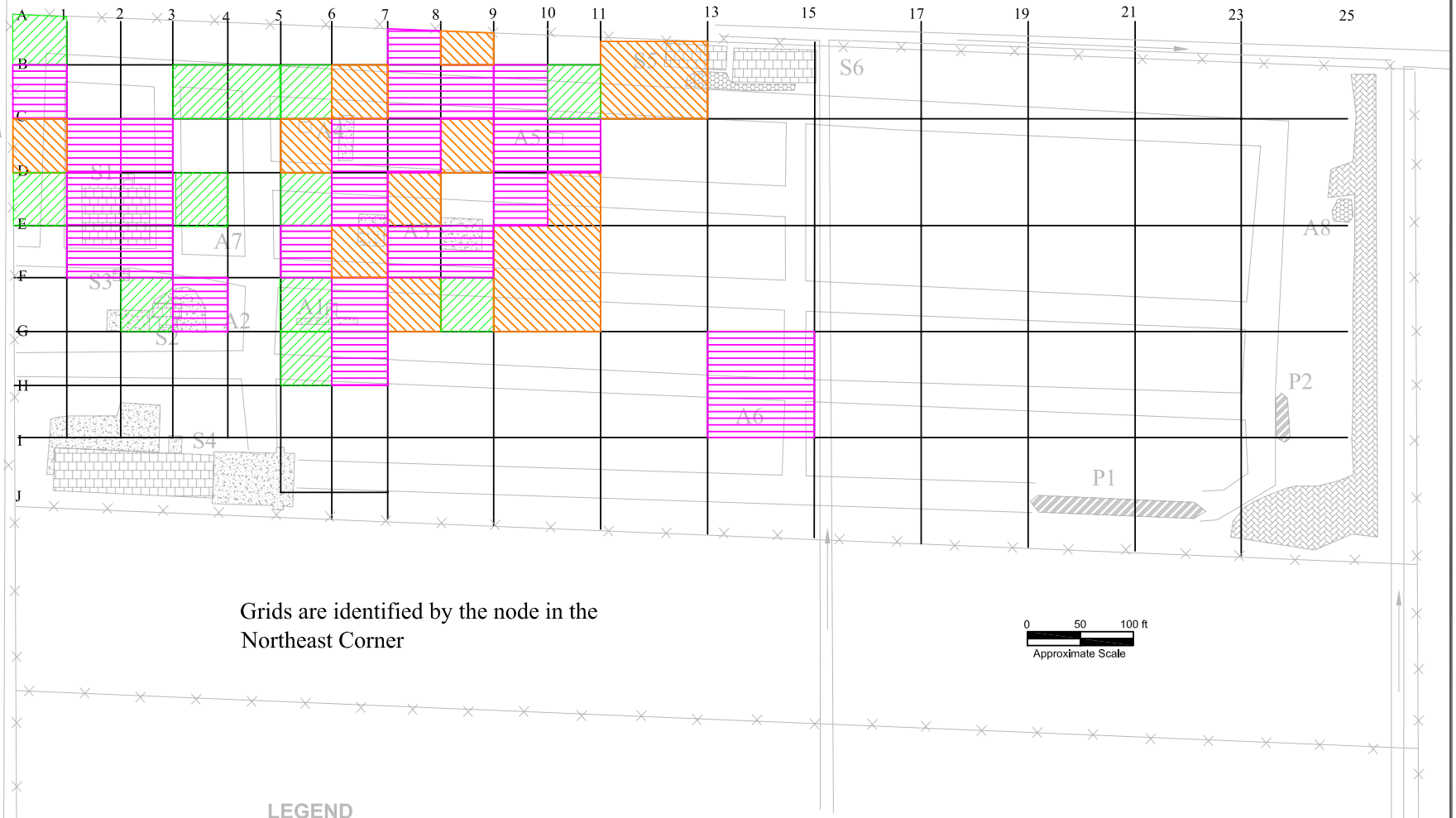
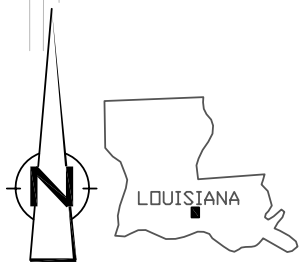


LEGEND

- TREES
- BUILDINGS
- CONCRETE
- XRF SCREENING RESULTS ABOVE 1400 mg/kg, SAMPLE RESULTS ABOVE 1400 mg/kg
- XRF SCREENING RESULTS ABOVE 1400 mg/kg, SAMPLE RESULTS BELOW 1400 mg/kg
- XRF SCREENING RESULTS ABOVE 1400 mg/kg, SAMPLE NOT COLLECTED
- SITE ROADS (SHELL/GRAVEL)
- A6 SITE AREA (NUMBER)
- S4 SITE BUILDING (NUMBER)
- FENCE
- 11 / B GRID LINES (NUMBER/LETTER)
- DRAINAGE DITCH & FLOW DIRECTION
- DRUM PILES
- SOIL PILE



SOURCE: TTEMI
TDD NO.: TO-0005-07-08-01
CERCLIS NO.: LA0000605278

US EPA REGION 6
START-3

FIGURE 4-1
SOIL SAMPLE RESULTS

CACTUS PIPE SPLP SAMPLING
SOUTH FIELDSPAN ROAD
DUSON, LAFAYETTE PARISH, LOUISIANA

DATE:	W.O. #	APPROX. SCALE:
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APPENDIX A

QUALITY ASSURANCE SAMPLING PLAN

REMOVAL ASSESSMENT
QUALITY ASSURANCE SAMPLING PLAN

FOR

CACTUS PIPE SPLP SAMPLING
SOUTH FIELDSPAN ROAD
DUSON, LAFAYETTE PARISH, LOUISIANA

Prepared For

U.S. Environmental Protection Agency Region 6
1445 Ross Ave.
Dallas, Texas 75202

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August 2007

APPROVALS

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Deputy Program Manager

U.S. Environmental Protection Agency

Warren Zehner
On-Scene Coordinator/Task Monitor

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APPENDICES

APPENDIX TITLE

1. INTRODUCTION

Weston Solutions, Inc. (WESTON®), the Superfund Technical Assessment and Response Team (START-III) contractor, has been tasked by the U.S. Environmental Protection Agency (EPA) Region 6 Response and Prevention Branch (RPB) under Contract Number EP-W-06-042, Technical Direction Document (TDD) No. TO-06-06-07-0001 (Appendix B) to perform a removal assessment including SPLP sampling at the Cactus Pipe site located near Duson, Lafayette Parish, Louisiana. A Site Location Map is provided as Figure 1. The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database number assigned to the Bayou Recycling Facility site is LA0000605278. START-III has prepared this Removal Assessment Quality Assurance Sampling Plan (QASP) to describe the technical scope of work to be completed as part of the removal assessment.

1.1 PROJECT OBJECTIVES

START-III is providing technical assistance to EPA Region 6 for the performance of the removal assessment and to collect the data necessary to support EPA's determination that the site presents a threat to public health or welfare of the United States or the environment in accordance with *40 Code of Federal Regulations (CFR) 300.415*.

The primary objective of this removal assessment is to collect and analyze soil samples to determine an appropriate cleanup level pursuant to applicable regulations within the state of Louisiana.

Soil samples will be collected from three grids within the site: one grid that contained the highest concentration of lead and two grids that contained lead near the proposed action level of 1400 milligrams per kilogram (mg/kg). Soil samples will be analyzed for total lead and Synthetic Precipitation Leachate Procedure (SPLP) lead.

1.2 PROJECT TEAM

The Project Team will consist of Jeff Criner, as the START-III Inspection/Assessment Manager; Robert Sherman, the START-III Project Team Leader (PTL); and two additional START-III personnel. The PTL will be responsible for the technical quality of work performed in the field

and will serve as the START-III liaison to EPA Region 6 in the field during the site activities. The PTL will oversee the collection of the samples as necessary, log the activities at each sample location in the field logbook, and verify sample documentation. Sample documentation and preparation is also the responsibility of START-III. The Project Team Leader will be responsible for documenting the work performed and will serve as START-III liaison to EPA Region 6.

1.3 QASP FORMAT

This QASP has been organized in a format that is intended to facilitate and effectively meet the project objectives. The QASP is organized in the following sections:

- Section 1 - Introduction
- Section 2 - Site Background
- Section 3 - Sampling Approach and Procedures
- Section 4 - Quality Assurance

An appendix is attached with the following information:

- Appendix A - Standard Operating Procedures

2.0 SITE BACKGROUND

Information about the site location and description, site history and features, and a summary of previous investigations, site description and a summary of background information is presented in the following subsections.

2.1 SITE LOCATION

The Cactus Pipe site is located on South Fieldspan Road (Louisiana Highway 724), approximately 1.5 miles south of U.S. Highway 90 west of Scott, Lafayette Parish, Louisiana. The geographic center of the site is Latitude 30.218611^{o} North and Longitude 92.141111^{o} West, as scaled from the United States Geological Survey (USGS) Duson Quadrangle, 7.5-minute series topographic map (Figure 1). The map scale is 1:24,000 and is in the North American Datum of 1927 (NAD-27). The site is bordered to the north by a residential home and livestock grazing land and to the south by commercial property. The site is also bordered by Fieldspan Road and agricultural land to the west and livestock grazing land to the east.

The site is situated on two parcels of land totaling approximately 20.525 acres. The northern parcel of land is 13.76 acres in size, and the southern parcel is 6.765 acres in size.

2.2 SITE HISTORY

The facility began operations as a pipe yard in 1971 under the name Cactus Pipe and Supply (CPS). Site operations included cleaning, threading, and distributing drill pipe for oilfield use. In 1978 CPS sold the 6.765 acre parcel to Grey Wolf Drilling. In 1980 GEO International (GEO) purchased CPS, and CPS continued to operate as a subsidiary of GEO. In 1982 GEO conveyed the land to CPS. CPS changed its name to GEO Pipe Company (GPC) in 1992. The facility ceased operations in March 1995 when GEO and GPC went into bankruptcy. On 15 May 1995, GEO abandoned the 13.76 acre parcel of land under Chapter 11 of Title 11 of the United States Code. The 6.765 acre parcel of land was purchased from Grey Wolf by Mr. John Pomier in May 1999. Mr. Pomier is the current owner of the land. Mr. Pomier operates American Waste Water systems on property adjacent to the 6.765 acre parcel.

2.3 REGULATORY HISTORY AND SUMMARY OF PREVIOUS INVESTIGATIONS

In 1989, Newpark Environmental Services (NES) conducted a Phase I Assessment of the Cactus facility. In 1990, NES conducted a Phase II Assessment that included the collection and analysis of soil samples. Eight composite samples were analyzed for ignitability, corrosivity, reactivity, and extraction procedure toxicity (EP Tox). No sample was ignitable, corrosive, or reactive. All eight samples contained some concentration of EP Tox metals, however, the only analyte with a concentration in excess of a regulatory level was lead in six of the eight samples. No samples were analyzed for total concentration of lead.

In 1990, CPS conducted a NORM survey during which samples were collected from soil piles and the tube cleaning area. Analysis of the samples indicated that site soils were contaminated with NORM.

In April 2000, the Superfund Technical Assessment and Response Team (START) contractor was tasked by the EPA Region 6 Response and Prevention Branch (RPB) to conduct a Preliminary Assessment at the Cactus site under TDD No. S06-99-12-0002.

In 2004, START-2 conducted a removal assessment of the site including radiation screening, in-situ screening of site soils with an X-Ray Fluorescence Spectrometer (XRF), and collecting soil samples for laboratory analysis of metals. START-2 determined the extent of contamination for both lead and NORM, and performed calculations estimating the volume of soils that would have to be removed based on cleanup levels of 500 ppm lead and 5 pCi/g of Radium.

In 2007, START-III gathered site specific information and prepared a Form UIC-23 waiver for the classification of certain waste streams as Non-Hazardous Oilfield Wasted (NOW waste) under Louisiana Department of Natural Resources (LDNR) regulations.

2.4 SITE DESCRIPTION

The Cactus site consists of two tracts of land. The northern parcel of land is 13.76 acres in size, and the southern parcel is 6.765 acres in size. The southern parcel was remediated prior to being sold to Mr. Pomier, and now consists of an open field which is mowed and maintained by the owner. A drainage ditch flows north through both sections of the site. Another drainage ditch flows north along the eastern boundary of the site. Both drainage ditches flow into another ditch along the northern boundary of the site that flows to the east.

The northern parcel is apparently where most of the site activities took place. The site includes six structures and numerous areas where other structures once stood. Numerous drums are scattered throughout the site, including a "drum pile" near the eastern edge of the site. Two soil piles are located on the site: one near the south edge of the northern parcel (P1), and one near the east end of the site (P2). Both soil piles had signs posted warning of a radiation hazard, however, a radiation scan of the site indicated that only P1 contained radiation levels above background.

Other areas on the site that are shown on the site sketch (Figure 2) include a former casing cutter area (A1), a fuel storage area (A2), a former machine shop (A3), a front casing hydrotesting area (A4), a rear casing hydrotesting area (A5), a casing inspection area (A6), the vehicle maintenance area (A7), two drum areas (A8 and A9).

3.0 SAMPLING APPROACH AND PROCEDURES

The specific field investigation activities that will be conducted during site sampling are presented in the following subsections. Sampling procedures and sample locations are also included.

3.1 OVERVIEW OF SAMPLING ACTIVITIES

START-III will collect 5-point composite surface soil samples from three grids: one grid that contained the highest concentration of lead and two grids that contained lead near the proposed action level of 1400 milligrams per kilogram (mg/kg). The grid that contained the highest concentration of lead during the removal assessment was grid C6 (30,496 mg/kg lead). Grids G6, A13, F8, B10, B5, C2, and B4 all contained approximately 1400 mg/kg lead.

START-III will locate grid node benchmarks from the 2004 sample mission, and recreate grid C6 and collect a 5-point composite sample. If START-III is unable to recreate grid C6 or cannot collect a sample from that grid, a sample will be collected from grid C7, which contained the second highest concentration of lead during the removal assessment (12,153 mg/kg lead).

START-III will recreate and sample two of the grids that contained approximately 1400 mg/kg lead (grids G6, A13, F8, B10, B5, C2, and B4).

Soil samples will be analyzed for total lead (SW-846 Method 6010) and Synthetic Precipitation Leachate Procedure (SPLP) lead (SW-846 Method 1312/6010).

3.1.1 Data Quality Objectives

The objectives of the screening and sampling activities described in the QASP are to determine the extent to which the lead in the soil presents a threat to groundwater. To accomplish this, soil samples will be analyzed for total lead and SPLP lead. The analytical data will be presented to the EPA On-Scene Coordinator who will use that information in discussions with LDEQ officials regarding the proposed cleanup levels.

3.1.2 Health and Safety Plan Implementation

The START-III field activities will be conducted in accordance with the site-specific health and safety plan (HASP). The Site Health and Safety Coordinator (SHSC) and will be responsible for implementation of the HASP during all field investigation activities. All START-III subcontractors will be required to conduct their activities according to the guidelines and requirements of the HASP. In accordance with the WESTON's general health and safety operating procedures, the field team will also drive the route to the hospital specified in the HASP prior to initiating sampling activities.

3.1.3 Community Relations

If EPA Region 6 personnel are not present in the field during the site activities, the START-III PTL, under the guidance of WESTON's Deputy Program Manager, will manage community relations in the field as directed by EPA.

3.2 SAMPLING AND ANALYSIS APPROACH

Soil sampling will be collected in general accordance with the EPA *Compendium of Emergency Response Team (ERT) Soil Sampling and Surface Geophysics Procedures* and with EPA ERT and WESTON Standard Operating Procedures (SOPs). All site and activity appropriate SOPs are provided in Appendix A. The specific sampling procedures are described below. A sample collection and analyses summary table is presented as Table 1.

3.2.1 Soil sampling

START-III proposes to collect three surface soil samples for laboratory analysis. A Proposed Soil Sample Location Map is provided as Figure 3. The samples will be 5-point composites from a depth of 0 to 6 inches below ground surface (bgs). A disposable plastic scoop will be used to collect samples. Soil from each aliquot will be placed in dedicated aluminum pans, homogenized, and transferred into one, wide mouth 8-ounce glass sampling jar. Each sample will be placed immediately in a cooler with ice. Upon completion of the soil boring, the hole will be backfilled with any unused soil. The soil samples will be collected in general accordance with

EPA/ERT SOP. All relevant observations and information will be recorded in the field logbook, RRC-EDMS RAID, and removal modules software.

3.2.2 Analysis

The soil samples will be delivered to the laboratory and be analyzed for total lead (SW-846 Method 6010) and SPLP lead (SW-846 Method 1312/6010). The samples are to be analyzed by the laboratory with a 48-hour turnaround time.

3.2.3 Investigation-Derived Waste (IDW)

Attempts will be made to eliminate or minimize IDW during this investigation. Excess soil/sediment generated in the course of sampling activities, will be returned to a previously sampled grid that exhibited NORM and lead concentrations above the site action level during screening. Personal protective equipment (PPE) used during sampling activities will be double bagged and left inside a building on-site. It is anticipated that minimal amounts of IDW will be generated during this activity.

3.2.4 Sampling and Sample Handling Procedures

Samples will be collected using equipment and procedures appropriate to the matrix, parameters, and sampling objective. The volume of the sample collected must be sufficient to perform the laboratory analysis requested. Samples must be stored in the proper types of containers and preserved in a manner appropriate to the analysis to be performed.

All clean, decontaminated sampling equipment and sample containers will be maintained in a clean, segregated area. All samples will be collected with clean decontaminated equipment (refer to appendix A, SOP 1201.01). All samples collected for laboratory analysis will be placed directly into pre-cleaned, unused glass or plastic containers. Sampling personnel will change gloves between each sample collection/handling. All samples will be assembled and catalogued prior to shipping (refer to Appendix A, SOPs 1101.01 and 1102.01) to the designated laboratory.

3.2.5 Field Quality Control Samples

Field QA/QC samples will be collected so that 10% of samples per matrix will be collected as blind duplicate sample analysis.

Samples will be collected according to the following:

- Blind field duplicate samples will be collected during sample activities for locations selected by the START-III PTL. The data obtained from these samples will be used to assist the quality assurance of the sampling procedures and laboratory analytical data by following an evaluation of reproducibility of results. Efforts will be made to collect duplicate samples in locations where there is visual evidence of contamination or where contamination is suspected. Blind field duplicate samples will be collected at the rate of one duplicate for every 10 samples collected. For this sampling mission, one duplicate will be collected.

3.3 SAMPLE MANAGEMENT

Specific nomenclature that will be used by WESTON will provide a consistent means of facilitating the sampling and overall data management for the project (Appendix A, SOP 0110.04). As stated in SOP 0110.04, sample nomenclature will follow a general format regardless of the type or location of the sample collected.

The Sample nomenclature will be as follows: samples will be named by the grid number with the suffix "-2", to differentiate the results from any analyses conducted in 2004.

Sample data management will be completed utilizing the EPA-provided Forms II Lite software.

3.4 DECONTAMINATION

Dedicated sampling equipment will be used during this sampling mission, therefore decontamination of sampling equipment will not be required.

Personnel decontamination procedures will consist of dry-decon and will be described in the site-specific HASP that will be prepared by WESTON prior to implementation of activities at the site.

3.5 SAMPLE PRESERVATION, CONTAINERS, AND HOLD TIMES

Once collected, samples will be stored in coolers while at the site and until they are submitted for analysis. The samples will be sent by common carrier to the laboratory. Lead samples will be analyzed for RCRA metals via EPA SW-846 Method 6010. SPLP lead samples will be extracted using SW-846 Method 1312 analyzed via EPA SW-846 Method 6010. The samples will be preserved to 4^{o}C. Holding time until laboratory analysis for metals is 180 days.

WESTON will receive analytical results based on discussions with the OSC. This turnaround time is initiated when the samples are collected in the field and continues until the analytical results are made available to WESTON either verbally or by providing facsimile copies of the results for review. Samples that have been analyzed will be disposed by the designated laboratory in accordance with the laboratory SOPs.

4. QUALITY ASSURANCE

Quality assurance will be conducted in accordance with WESTON's Quality Assurance Project Plan (QAPP), dated May 2004. The START-III PTL will be responsible for QA/QC of the field sampling activities. The designated laboratory used during sample analysis will be responsible for QA/QC analytical procedures.

4.1 SAMPLE CUSTODY PROCEDURES

START-III will utilize Forms II Lite for all sample documentation and chain-of-custody preparation needs. Because of the evidentiary nature of sample collection, the possession of samples must be traceable from the time the samples are collected until they are introduced as evidence in legal proceedings. After sample collection and identification, the samples will be maintained under the chain-of-custody procedures.

The chain-of-custody (COC) procedures are documented in SOP 1101.01, Appendix A, and will be made available to all personnel involved with the sampling. A typical chain-of-custody record included in SOP 1101.01 will be completed each time a sample or group of samples is prepared for shipment to the laboratory. The record will repeat the information on each of the sample labels and will serve as documentation of handling during shipment. A copy of this record will remain with the shipped samples at all times, and the member of the sampling team who originally relinquished the samples will retain another copy. START-III personnel will complete a COC form for all samples sent to a START-III designated off-site laboratory.

Samples relinquished to the participating laboratories will be subject to the following procedures for transfer of custody and shipment:

- The chain-of-custody record will accompany samples. When transferring possession of samples, the individuals relinquishing and receiving the samples will sign, date, and note the time of the sample transfer on the record. This custody record documents transfer of sample custody from the sampler to another person or to the laboratory.
- Samples will be properly packed for shipment and dispatched to the appropriate laboratory for analysis with separate, signed custody records enclosed in each sample box or cooler. Sample shipping containers will be custody-sealed for shipment to the laboratory. The preferred procedure includes use of a custody seal wrapped across filament tape that is wrapped around the package at least twice. The custody seal will

then be folded over and stuck to itself to ensure that the only access to the package is by cutting the filament tape or breaking the seal to unwrap the tape.

- If sent by common carrier, a bill of lading or airbill will be used. Bill of lading and airbill receipts will be retained in the project file as part of the permanent documentation of sample shipping and transfer.

SOPs 1101.01 and 1102.01 Appendix A, describe these procedures in more detail.

4.2 PROJECT DOCUMENTATION

Field Documentation

START-III will perform field documentation of site activities during all fieldwork. The primary methods of documentation will be completion of a field logbook and photo documentation. All documents will be completed legibly and in ink. Any corrections or revisions will be made by lining through the original entry and initialing the change. The following field documentation will be maintained:

Field Logbook (SOP 1501.01)

The field logbook is a descriptive notebook detailing site activities and observations so that an accurate, factual account of field procedures may be reconstructed. The individuals making them will sign all entries. Entries should include, at a minimum, the following:

- Site name and project number.
- Names of personnel on-site.
- Dates and times of all entries.
- Descriptions of all site activities, including site entry and exit times.
- Noteworthy events and discussions.
- Weather conditions.
- Site observations.
- Identification and description of samples and locations.
- Subcontractor information and names of on-site personnel.
- Dates and times of sample collections and chain-of-custody information.
- Records of photographs.
- Site sketches.

Sample Labels

Sample labels will be securely affixed to the sample container. They will clearly identify the particular sample and should include the following information:

- Site name and project number.
- Date and time the sample was collected.
- Sample preservation method.
- Analysis requested.
- Sampling location.

Chain-of-Custody Record (SOP 1101.01)

A chain-of-custody record will be maintained from the time of sample collection until final deposition. Every transfer of custody will be noted and signed, and each individual who has signed it will keep a copy of the record. The chain-of-custody is discussed in Subsection 5.1, Sample Custody Procedures.

Custody Seal

Custody seals demonstrate that a sample container has not been opened or tampered with. The individual who has custody of the samples will sign and date the seal and affix it to the container in such a manner that it cannot be opened without breaking the seal.

Photo Documentation

START-III will take photographs to document site conditions and activities as site work progresses. Initial conditions should be well documented by photographing features that define the site-related contamination or special working conditions. Representative photographs should be taken of each type of site activity. The photographs should show typical operations and operating conditions as well as special situations and conditions that may arise during site activities. Site final conditions should also be documented by photograph as a record of how the site appeared at completion of the work.

All photographs should be taken with a film camera, a digital camera, or a video camera capable of recording the date on the image. Each photograph should be recorded in the logbook with the location of the photographer, direction the photograph was taken, the subject of the photograph, and its significance (i.e., why the picture was taken). Where appropriate, the photograph location, direction, and subject should also be shown on a site sketch. SOPs 1502.01 and 1502.02, Appendix A, discuss photo documentation in more detail.

APPENDICES

APPENDIX A

REFERENCED STANDARD OPERATING PROCEDURES

REFERENCED STANDARD OPERATING PROCEDURES

SOP	**0110.04**				
GROUP	Database Management System				
SUB-GROUP	Data Collection and Acquisition				
TITLE	On-Site Sample Nomenclature - On-Site Sampling Activities				
DATE	11/15/2007	**FILE**	0110-04.DOC	**PAGE**	1 of 1

INTRODUCTION

The following Standard Operating Procedure (SOP) presents the remediation sample nomenclature for analytical samples. The sample nomenclature is based upon specific code requirements for compatibility with the WESTON On-Line system

PROCEDURE

Sampling Stations.

Station Type	Template
Soil Stockpile	SS##
Monitoring Well	MW##
Surface Water Pond	POND##
Air Sampler	AIR##

Sample Nomenclature.

Sample Type	Template	Example
Soil Composite Sample	Stockpile - Type - QC - Sequence	SS01-CO-N-1
Surface Water Sample	Surface Water Pond-Type-QC-Sequence	POND03-CO-N-1
Groundwater Sample	Monitoring Well-Type-QC-Sequence	MW12-CO-N-1
Ambient Air Sample	Air Sampler-Sample Type-QC Type-Sequence	AIR01-TI-N-1

Note: Sequence is a numeric counter to make Sample ID unique if more than one sample is collected.

Sample Types.

Sample Type Description	Code
Composite	CO
Grab	G
Product – DNAPL	PD
Product – LNAPL	PL
Split	SP
Time Integrated	TI

QA/QC Types.

QA/QC Type Description	Code
Normal	N
Duplicate	D
Field Blank	FB
Rinse Blank	RB
Trip Blank	TB

SOP	**1101.01**				
GROUP	Sampling Handling				
SUB-GROUP	Sample Custody				
TITLE	Sample Custody in the Field				
DATE	**11/15/2007**	**FILE**	Document1	**PAGE**	1 of 1

INTRODUCTION

The following Standard Operating Procedure (SOP) presents procedures for maintaining sample chain of custody (COC) during activities where samples are collected.

PROCEDURE

Sample custody is defined as being under a person's custody if any of the following conditions exist:

- it is in their possession,
- it is in their view, after being in their possession,
- it was in their possession and they locked it up, or
- it is in a designated secure area.

A designated field sampler will be personally responsible for the care and custody of collected samples until they are transferred to another person or properly dispatched to the laboratory. To the extent practicable, as few people as possible will handle the samples.

Sample tags or labels will be completed and applied to the container of each sample. When the tags or labels are being completed, waterproof ink will be used. If waterproof ink is not used, the tags or labels will be covered by transparent waterproof tape. Sample containers may also be placed in Ziploc-type storage bags to help keep them clean in the cooler. Information typically included on the sample tags or labels will include the following:

- Project Code
- Station Number and Location
- Sample Identification Number
- Date and Time of Sample Collection
- Type of Laboratory Analysis Required
- Preservation Required, if applicable
- Collector's Signature
- Priority (optional)
- Other Remarks

Additional information may include:

- Anticipated Range of Results (Low, Medium, or High)
- Sample Analysis Priority

A COC form will be completed each time a sample or group of samples is prepared for transfer to the laboratory. The form will repeat the information on each of the sample labels and will serve as documentation of handling during shipment. The minimum information requirements of the COC form are listed in Table 1101.01-A. An example COC form is shown in Figure 1101.01-A. The completed COC must be reviewed by the Field Team Leader or Site Manager prior to sample shipment. The COC

form will remain each sample shipping container at all times, and another copy will be retained by the member of the sampling team who originally relinquished the samples or in a project file.

TABLE 1101.01-A CHAIN OF CUSTODY FORM

INFORMATION	COMPLETED BY	DESCRIPTION
COC	Laboratory	enter a unique number for each chain of custody form
SHIP TO	Field Team	enter the laboratory name and address
CARRIER	Field Team	enter the name of the transporter (e.g., FedEx) or handcarried
AIRBILL	Field Team	enter the airbill number or transporter tracking number (if applicable)
PROJECT NAME	Field Team	enter the project name
SAMPLER NAME	Field Team	enter the name of the person collecting the samples
SAMPLER SIGNATURE	Field Team	signature of the person collecting the samples
SEND RESULTS TO	Field Team	enter the name and address of the prime contractor
FIELD SAMPLE ID	Field Team	enter the unique identifying number given to the field sample (includes MS, MSD, field duplicate and field blanks)
DATE	Field Team	enter the year and date the sample was collected in the format M/D (e.g., 6/3)
TIME	Field Team	enter the time the sample was collected in 24 hour format (e.g., 0900)
MATRIX	Field Team	enter the sample matrix (e.g., water, soil)
PRESERVATIVE	Field Team	enter the preservative used (e.g., HNO3) or “none”
FILTERED/ UNFILTERED	Field Team	enter “F” if the sample was filtered or “U” if the sample was not filtered
CONTAINERS	Field Team	enter the number of containers associated with the sample
MS/MSD	Field Team or Laboratory	enter “X” if the sample is designated for the MS/MSD
ANALYSES REQUESTED	Field Team	enter the method name of the analysis requested (e.g., SW6010A)
COMMENTS	Field Team	enter comments
SAMPLE CONDITION UPON RECEIPT AT LABORATORY	Laboratory	enter any problems with the condition of any sample(s)
COOLER TEMPERATURE	Laboratory	enter the internal temperature of the cooler, in degrees C, upon opening
SPECIAL INSTRUCTIONS/COMMENTS	Laboratory	enter any special instructions or comments
RELEASED BY (SIG)	Field Team and Laboratory	enter the signature of the person releasing custody of the samples
COMPANY NAME	Field Team and Laboratory	enter the company name employing the person releasing/receiving custody
RECEIVED BY (SIG)	Field Team and Laboratory	enter the signature of the person receiving custody of the samples
DATE	Field Team and Laboratory	enter the date in the format M/D/YY (e.g., 6/3/96) when the samples were released/received
TIME	Field Team and Laboratory	enter the date in 24 hour format (e.g., 0900) when the samples were released/received

SOP	**1102.01**				
GROUP	Sample Handling				
SUB-GROUP	Sample Shipping				
TITLE	Sample Shipping				
DATE	11/15/2007	**FILE**	1102-01.DOC	**PAGE**	1 of 1

INTRODUCTION

The following Standard Operating Procedure (SOP) presents the procedures for sample shipping that will be implemented during field work involving sampling activities.

TERMS

COC - Chain-of-Custody

PROCEDURE

Prior to shipping or transferring custody of samples, they will be packed according to D.O.T. requirements with sufficient ice to maintain an internal temperature of 4°C ± 2°C during transport to the laboratory. Samples relinquished to the participating laboratories will be subject to the following procedures for transfer of custody and shipment:

1. Samples will be accompanied by a COC record. When transferring possession of samples, the individuals relinquishing and receiving the samples will sign, date, and note the time of the sample transfer on the record. If sent by common carrier, a bill of lading or airbill should be used. Bill of lading and airbill receipts will be retained in the project file as part of the permanent documentation of sample shipping and transfer. This custody record documents transfer of sample custody from the sampler to another person or to the laboratory. The designated laboratory will accept custody in the field upon sample pick-up or at the laboratory if the samples are delivered via field personnel or a courier service.
2. Samples will be properly packed in approved shipping containers for laboratory pick-up by the appropriate laboratory for analysis, with separate, signed custody records enclosed in each sample box or cooler. Sample shipping containers will be padlocked or custody-sealed for transfer to the laboratory. The preferred procedure includes use of a custody seal wrapped across filament tape that is wrapped around the package at least twice. The custody seal will then be folded over and stuck to itself so that the only access to the package is by cutting the filament tape or breaking the seal to unwrap the tape. The seal will then be signed. The designated laboratory will accept custody of the samples upon receipt.
3. Whenever samples are split with state representatives or other parties, the COC record will be marked to indicate with whom the samples were split.
4. The field sampler will call the designated laboratory to inform them of sample shipment and verify sample receipt as necessary.

SOP	**1201.01**				
GROUP	Decontamination				
SUB-GROUP	Sampling Equipment Decontamination				
TITLE	Sampling Equipment Decontamination				
DATE	11/15/2007	**FILE**	1201-01.DOC	**PAGE**	1 of 1

INTRODUCTION

The following Standard Operating Procedure (SOP) presents the methods used for minimizing the potential for cross-contamination, and provides general guidelines for sampling equipment decontamination procedures.

PROCEDURE

As part of the Health and Safety Plan (HASP), develop and set up a decontamination plan before any personnel or equipment enter the areas of potential exposure. The decontamination plan should include the following:

- The number, location, and layout of decontamination stations
- Which decontamination apparatus is needed
- The appropriate decontamination methods
- Methods for disposal of contaminated clothing, apparatus, and solutions

Decontamination Methods

Personnel, samples, and equipment leaving the contaminated area of a site will be decontaminated. Various decontamination methods will be used to either physically remove contaminants, inactivate contaminants by disinfection or sterilization, or both. The physical decontamination techniques appropriate for equipment decontamination can be grouped into two categories: abrasive methods and non-abrasive methods.

Abrasive Cleaning Methods

Abrasive cleaning methods work by rubbing/scrubbing the surface containing the contaminant. This method includes mechanical and wet blasting methods.

Mechanical cleaning methods use brushes of metal or nylon. The amount and type of contaminants removed will vary with the hardness of bristles, length of brushing time, and degree of brush contact.

Cleaning can also be accomplished by water blasting which is also referred to as steam cleaning and pressure washing. Pressure washing utilizes high-pressure that is sprayed from a nozzle onto sampling equipment to physically remove soil or (potentially) contaminated material. Steam cleaning is a modification of pressure washing where the water is heated to temperatures approaching 100°C to assist in removing organic constituents from equipment.

Disinfection/Rinse Methods

Disinfectants are a practical means of inactivating chemicals or contaminants of concern. Standard sterilization methods involve heating the equipment which is impractical for large equipment. Rinsing removes contaminants through dilution, physical attraction, and solubilization.

The use of distilled/deionized water commonly available from commercial vendors may be acceptable for decontamination of sampling equipment provided that it has been verified by laboratory analysis to be target analyte free. Tap water may be used from any municipal water treatment system for mixing of decontamination solutions. An untreated potable water supply is not an acceptable substitute for tap water. Acids and solvents are occasionally utilized in decontamination of equipment to remove metals and organics, respectively, from sampling equipment. Other than ethanol, these are avoided when possible due to the safety, disposal, and transportation concerns associated with them.

Equipment or apparatuses that may be selected for use include the following:

- Personal protective clothing
- Non-phosphate detergent
- Selected solvents for removal of polar and nonpolar organics (ethanol, methanol, hexane)
- Acid washes for removal of metals (nitric acid)
- Long-handled brushes
- Drop cloths or plastic sheeting
- Paper towels
- Galvanized tubs or buckets
- Distilled, deionized, or tap water (as required by the project)
- Storage containers for spent wash solutions
- Sprayers (pressurized and non-pressurized)
- Trash bags
- Safety glasses or splash shield

<u>Field Sampling Equipment Cleaning Procedures</u>

The following procedures should be followed:

1. Where applicable, follow physical removal procedures previously described (pressure wash, scrub wash)
2. Wash equipment with a non-phosphate detergent solution
3. Rinse with tap water
4. Rinse with distilled or deionized water
5. Rinse with 10% nitric acid if the sample will be analyzed for metals/organics
6. Rinse with distilled or deionized water
7. Use a solvent rinse (pesticide grade) if the sample will be analyzed for organics
8. Air dry the equipment completely
9. Rinse again with distilled or deionized water

10. Place in clean bag or container for storage/transport to subsequent sampling locations.

Selection of the solvent for use in the decontamination process is based on the contaminants present at the site. Solvent rinses are not necessarily required when organics are not a contaminant of concern and may be eliminated from the sequence specified below. Similarly, an acid rinse is not required if the analyses do not include inorganics. Use of a solvent is required when organic contamination is present on-site. Typical solvents used for removal of organic contaminants include acetone, ethanol, hexane, methanol, or water. An acid rinse step is required if metals are present on-site. If a particular contaminant fraction is not present at the site, the ten-step decontamination procedure listed above may be modified for site specificity.

Sampling equipment that requires the use of plastic tubing should be disassembled and the tubing replaced with clean tubing before commencement of sampling and between sampling locations. Plastic tubing should not be reused.

SOP	**1501.01**				
GROUP	Field Documentation				
SUB-GROUP					
TITLE	Field Logbook				
DATE	11/15/2007	**FILE**	1501-01.DOC	**PAGE**	1 of 1

INTRODUCTION

The following Standard Operating Procedure (SOP) presents the procedures for documenting activities observed or completed in the field in a field logbook. The documentation should represent all activities of WESTON personnel and entities under WESTON's supervision.

TERMS

FSP - Field Sampling Plan

SAP - Sampling and Analysis Plan

QAPP - Quality Assurance Project Plan

HASP - Health and Safety Plan

PROCEDURE

Field logbooks will be used and maintained during field activities to document pertinent information observed or completed by WESTON personnel or entities that WESTON is responsible for providing oversight. Field logbooks are legal documents that form the basis for later written reports and may serve as evidence in legal proceedings. The Site Manager or Field Team Leader will review field log entries daily and initial each page of entries. Field logbooks will be maintained by the Site Manager or Field Team Leader during field activities and transferred to the project files for a record of activities at the conclusion of the project. General logbook entry procedures are listed below.

- Logbooks must be permanently bound with all pages numbered to the end of the book. Entries should begin on page 1.
- Only use blue or black ink (waterproof) for logbook entries.
- Sign entries at the end of the day, or before someone else writes in the logbook.
- If a complete page is not used, draw a line diagonally across the blank portion of the page and initial and date the bottom line.
- If a line on the page is not completely filled, draw a horizontal line through the blank portion.
- Ensure that the logbook clearly shows the sequence of the day's events.

- Do not write in the margins or between written lines, and do not leave blank pages to fill in later.
- If an error is made, make corrections by drawing a single line through the error and initialing it.
- Maintain control of the logbook and keep in a secure location.

Field logbooks will contain, at a minimum, the following information, if applicable:

General Information

- Name, location of site, and work order number
- Name of the Site Manager or Field Team Leader
- Names and responsibilities of all field team members using the logbook (or involved with activities for which entries are being made)
- Weather conditions
- Field observations
- Names of any site visitors including entities that they represent

Sample Collection Activities

- Date(s) and times of the sample collection or event.
- Number and types of collected samples.
- Sample location with an emphasis on any changes to documentation in governing documents (i.e., SAP, FSP). This may include measurements from reference points or sketches of sample locations with respect to local features.
- Sample identification numbers, including any applicable cross-references to split samples or samples collected by another entity.
- A description of sampling methodology, or reference to any governing document (i.e., FSP, SAP, QAPP).
- Summary of equipment preparation and decontamination procedures.
- Sample description including depth, color, texture, moisture content, and evidence of waste material or staining.
- Air monitoring (field screening) results.
- Types of laboratory analyses requested.

Site Health and Safety Activities

- All safety, accident, and/or incident reports.
- Real-time personnel air monitoring results, if applicable, or if not documented in the HASP.
- Heat/cold stress monitoring data, if applicable.
- Reasons for upgrades or downgrades in personal protective equipment.
- Health and safety inspections, checklists (drilling safety guide), meetings/briefings.
- Calibration records for field instruments.

Oversight Activities

- Progress and activities performed by contractors including operating times.
- Deviations of contractor activities with respect to project governing documents (i.e., specifications).
- Contractor sampling results and disposition of contingent soil materials/stockpiles.
- Excavation specifications and locations of contractor confirmation samples.

General site housekeeping and safety issues by site contractors.

SOP	**1502.01**				
GROUP	Field Documentation				
SUB-GROUP					
TITLE	Photograph Logs				
DATE	11/15/2007	**FILE**	1502-01.DOC	**PAGE**	1 of 1

INTRODUCTION

The following Standard Operating Procedure (SOP) presents the requirements for collecting information related to photodocumentation of site activities.

PROCEDURE

- Uniquely number each roll of film obtained for use.
- Record the following information for each negative exposed:
    1. Date and Time
    2. Photographer Name
    3. Witness Name
    4. Orientation (Landscape, Portrait, or Panaoramic)
    5. Description (including activity being performed, specific equipment of interest, sample location(s), compass direction photographer is facing)
- Record "NA" for the negatives not used if the roll is not completely used prior to development.
- Record unique roll number on receipt when film is submitted for development.
- Verify descriptions on log with negative numbers when photographs are received from processing.

FORMS

Blank Photograph Logs can be printed from WESTON On-Line from the *Records Management Application.* Selecting the *Reports/Project Planning/Blank Photo Logs* menu option will generate a project specific log with 36 entries.

SOP	**1502.02**			
GROUP	Field Documentation			
SUB-GROUP				
TITLE	Photograph Management and Reporting			
DATE	4/30/02	**FILE**	1502-02.DOC	**PAGE** 1 OF 1

INTRODUCTION

The following Standard Operating Procedure (SOP) presents the requirements for managing and reporting information related to photodocumentation of site activities.

PROCEDURE

Enter the Photograph Log information specified in SOP 1502.01 into WESTON On-Line *Records Management Application*. The data entry screen can be accessed by selecting the *Data/Photograph Log* menu option.

REPORTS

Complete Photograph Logs can be printed from WESTON On-Line from the *Records Management Application.* Selecting the *Reports/Summary Tables/Photographs/Logs* menu option will generate a specific log for a selected roll of film.

Photograph Templates can be printed from WESTON On-Line from the *Records Management Application.* Selecting the *Reports/Summary Tables/Photographs/Templates* menu option will generate templates for mounting the photographs for a selected roll of film.

APPENDIX B

TDD TO-0005-07-08-01

EPA

U.S. EPA
Washington, DC 20460

START3
Technical Direction Document

Assessment/Inspections
Activities-Removal Funds (0005)
Weston Solutions, Inc.

TDD #: TO-0005-07-08-01
Contract: EP-W-06-042

! = required field

TDD Name:	Cactus Pipe SPLP sampling	! Period:	Base Period
! Purpose:	Work Assignment Initiation		
! Priority:	High	! Start Date:	08/28/2007
Overtime:	Yes	! Completion Date:	09/28/2007
! Funding Category:	Removal	Invoice Unit:	
! Project/Site Name:	Cactus Pipe	WorkArea:	ASSESSMENT/INSPECTIONS ACTIVITIES
Project Address:		Activity:	Removal Assessment (RA)
County:	Lafayette	Work Area Code:	
City, State:	near Duson, LA	Activity Code:	RS
Zip:		EMERGENCY CODE:	☐ KAT ☐ RIT
! SSID:	06JQ	FPN:	
CERCLIS:	LA0000605278	Performance Based:	No
Operable Unit:			

Authorized TDD Ceiling:	Cost/Fee	LOE (Hours)
Previous Action(s):	$0.00	0.0
This Action:	$15,000.00	0.0
New Total:	$15,000.00	0.0

Specific Elements Provide technical support to EPA on removal assessment activities.

Description of Work:
START 3 shall assistthe OSC in collecting and documenting 3 SPLP samples at locations determined by the OSC on the Site. START 3 shall procure laboratory services for "rush" SPLP lead analysis for said samples.

Accounting and Appropriation Information

SFO: 22

Line	DCN	IFMS	Budget/ FY	Appropriation Code	Budget Org Code	Program Element	Object Class	Site Project	Cost Org Code	Amount
1	RVC014	AHW	07	T	6A00E	302DC6C	2505	06JQRS00	C001	$15,000.00

Funding Summary:	Funding
Previous:	$0.00
This Action:	$15,000.00
Total:	$15,000.00

Funding Category
Removal

Section
- Signed by Warren Zehner/R6/USEPA/US on 08/24/2007 10:38:18 AM, according to Jeff Criner/rfw-start
: Warren Zehner **Date:** 08/24/2007

Project Officer Section - Signed by Linda Carter/R6/USEPA/US on 08/24/2007 03:20:38 PM, according to Jeff Crine

Project Officer: Linda Carter **Date:** 08/24/2007

Contracting Officer Section - Signed by Tobin Osterberg/R6/USEPA/US on 08/28/2007 07:46:43 AM, according to J

Contracting Officer: Tobin Osterberg **Date:** 08/28/2007

Contractor Section

Contractor Contact: **Date:**

ADDENDUM NO. 1
FOR THE AUGUST 2007
QUALITY ASSURANCE SAMPLING PLAN

FOR

CACTUS PIPE SPLP SAMPLING
SOUTH FIELDSPAN ROAD
DUSON, LAFAYETTE PARISH, LOUISIANA

Prepared for

U.S. Environmental Protection Agency Region 6
Linda Carter, Project Officer
1445 Ross Avenue
Dallas, Texas 75202

Contract No. EP-W-06-042
Technical Direction Document No. TO-0005-07-08-01
WESTON Work Order No. 20406.012.005.0211.01
NRC No. N/A
CERCLIS No. LA0000605278
FPN No. N/A
EPA OSC: Warren Zehner
START-3 PTL: Robert W. Sherman

Prepared by

Weston Solutions, Inc.
Robert Beck, P.E., Program Manager
70 NE Loop 410, Suite 600
San Antonio, Texas 78216
(210) 308-4300

September 2007

SIGNATURE PAGE

Warren Zehner
U.S. EPA Region 6
On-Scene Coordinator

9/28/2007
Date

Cecilia Shappee, P.E.
Weston Solutions, Inc.
START-3 Quality Assurance Officer

Date

Robert Sherman
Weston Solutions, Inc.
START-3 Project Team Leader

9-27-2007
Date

TABLE OF CONTENTS

Section **Page**

LIST OF APPENDICES

LIST OF FIGURES

Title

LIST OF TABLES

Title **Page**

1. INTRODUCTION

Weston Solutions, Inc. (WESTON®), the Superfund Technical Assessment and Response Team (START-3) contractor, has been tasked by the U.S. Environmental Protection Agency (EPA) Region 6 Prevention and Response (PRB) under Contract Number EP-W-06-042, Technical Direction Document (TDD) No. TO-0005-07-08-01 (Appendix A) to perform a removal assessment including Synthetic Precipitation Leachate Procedure (SPLP) sampling at the Cactus Pipe site located near Duson, Lafayette Parish, Louisiana. The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database number assigned to the Bayou Recycling Facility site is LA0000605278. This is an Addendum to the August 2007 QASP for additional SPLP sampling at the Cactus Pipe facility.

2. PROJECT TEAM

The Project Team will consist of David Bordelon, START-3 Deputy Program Manager; Robert Sherman, START-3 Project Team Leader (PTL); and additional personnel, as necessary. The PTL will be responsible for documenting the work performed in the field and will serve as the START-3 liaison to the EPA On-Scene Coordinator (OSC) Warren Zehner and the local community during the sampling activity. The PTL, with the concurrence of the OSC, will verify sampling locations or select optional sampling locations and complete the sampling activities. The PTL will be responsible for collecting samples at the selected locations and providing documentation and quality assurance (QA) support throughout the project. The PTL will be responsible for ensuring that the site health and safety plan is followed.

3. PROJECT OBJECTIVES

START-3 is providing technical support to EPA for the performance of the Cactus Pipe Removal Assessment. The objectives of the removal assessment are the following:

- To investigate the nature and extent of site-related contamination present at the site.
- To determine if site-related contamination, if any, presents an imminent threat and substantial endangerment to public health, or welfare, or the environment as they relate to criteria from 40 *Code of Federal Regulation* (CFR) 300.415(b).

The primary objective of this removal assessment is to collect and analyze soil samples to determine an appropriate cleanup level pursuant to applicable regulations within the state of Louisiana. The data quality objective (DQO) is the same as that outlined in the August 2007 QASP.

The objectives of the removal assessment will be achieved by evaluating data obtained during the field investigation through the collection of samples from the Cactus Pipe site. During the removal assessment conducted in 2004, the site was divided into grids and each grid was screened for lead using a field-portable X-Ray Fluorescence Spetctrometer (XRF).

4. SAMPLING AND ANALYSIS ACTIVITIES

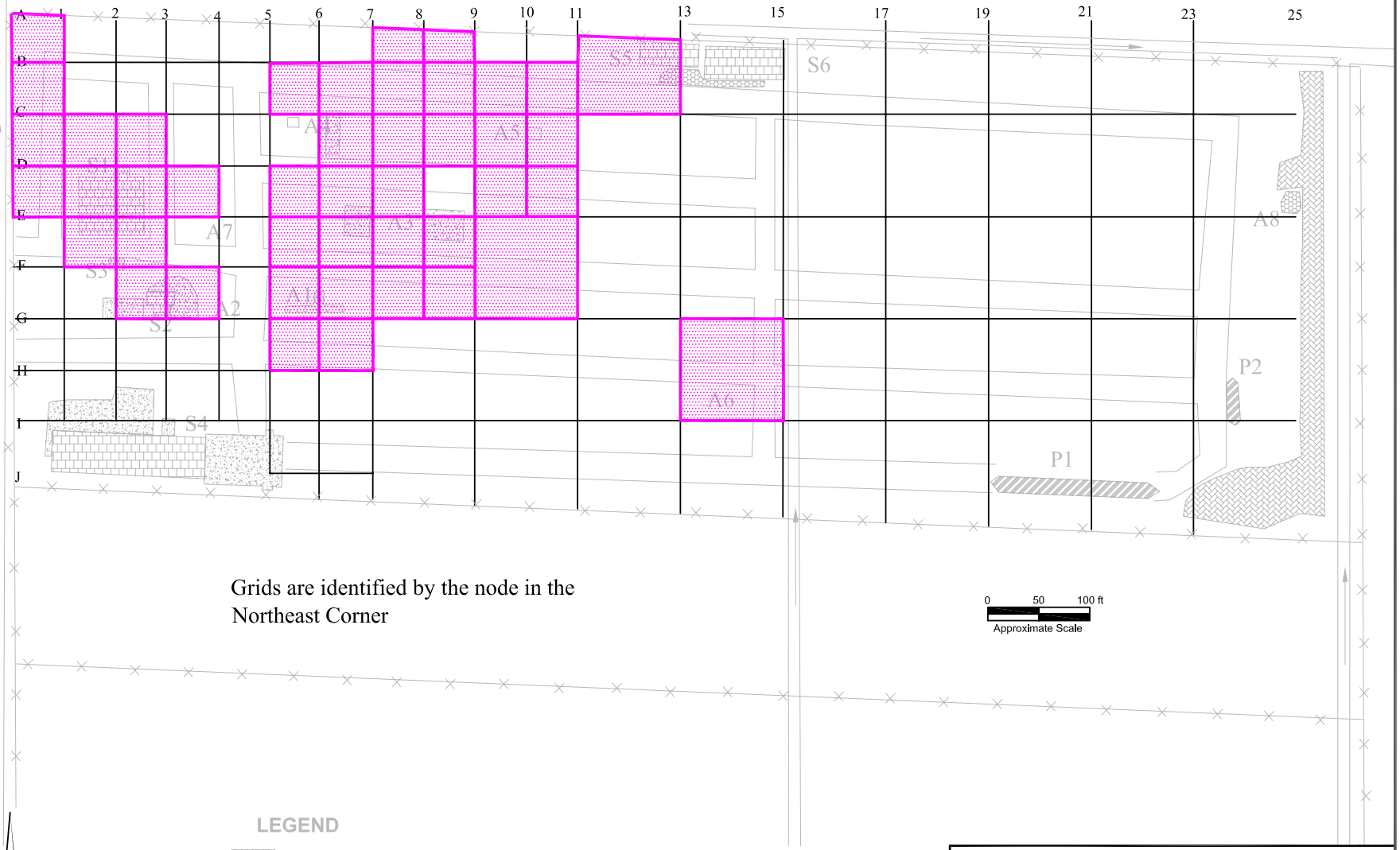
Forty-four grids that had lead screening values of 1,400 parts per million (ppm) during the 2004 removal assessment have not yet been sampled for laboratory analysis . During the Addendum No. 1 field activities, soil samples will be collected from twenty of those grids, and will be analyzed for total lead (SW-846 Method 6010). Table 4-1 and Figure 4-1 present the locations of the 20 grids and a tabular tracking method for field sampling activities, respectively. Of the twenty soil samples collected, five samples will also be analyzed for SPLP lead (SW-846 Method 1312/6010). All sample collection methods and analytical methods will be the same as in the original sampling mission, as described in the QASP of August 2007. The samples will be delivered to Gulf Coast Analytical Laboratory for analysis.

5. DATA VALIDATION AND REPORTING

Data validation and reporting will be in accordance with the procedures outlined in the August 2007 QASP.

Table 4-1
Grid Sample Location Summary
Site Name: Cactus Pipe
TDD No.: TO-0005-07-08-01
Date: 27 September 2007

Grid ID	Total Lead Samples (20 to be collected)	SPLP Lead Samples (5 to be collected)	Total Lead duplicates (2 to be collected)	SPLP Lead duplicates (1 to be collected)
A-1				
A-8				
A-9				
A-13				
B-1				
B-6				
B-7				
B-8				
A-B				
B-10				
B-11				
C-1				
C-2				
C-3				
C-7				
C-8				
C-9				
C-10				
C-11				
D-1				
D-2				
D-3				
D-4				
D-6				
D-7				
D-8				
D-10				
D-11				
E-2				
E-3				
E-6				
E-7				
E-8				
E-9				
E-11				
F-3				
F-4				
F-6				
F-7				
F-8				
F-9				
G-6				
G-7				
G-15				
	Total: (20 required)	Total: (5 required)	Total: (2 required)	Total: (1 required)

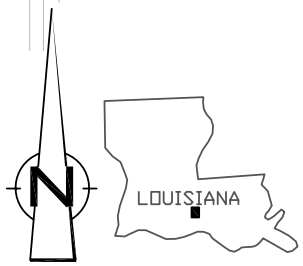


Grids are identified by the node in the Northeast Corner

0 50 100 ft
Approximate Scale

LEGEND

- TREES
- BUILDINGS
- CONCRETE
- SOIL PILE
- XRF SCREENING ABOVE 1,400 ppm Pb
- SITE ROADS (SHELL/GRAVEL)
- A6 SITE AREA (NUMBER)
- S4 SITE BUILDING (NUMBER)
- FENCE
- B 11 GRID LINES (NUMBER/LETTER)
- DRAINAGE DITCH & FLOW DIRECTION
- DRUM PILES



SOURCE: TTEMI
TDD NO.: TO-0005-07-08-01
CERCLIS NO.: LA0000605278

US EPA REGION 6
START-3

FIGURE 4-1
SOIL SAMPLING GRID

CACTUS PIPE SITE
DUSON, LAFAYETTE PARISH, LOUISIANA

DATE:	W.O. #	APPROX. SCALE:
AUG 07	20406.012.005.0211.01	AS SHOWN

002116

APPENDIX B

DIGITAL PHOTOGRAPHS

PhotoTracker (executable file/4.8 MB) and digital photographs are available for the OSC/TM review. To receive a review copy of the attachment, please contact the START-3 PTL.

#####START OF SITE#####
01)Cactus Pipe SPLP Sampling
02)N/A
03)Duson, Lafayette Parish, Louisiana
04)TO-0005-07-08-01
05)N/A
#####END OF SITE#####

#####START OF RECORD#####
01)08/30/2007
02)Grid B4 from node B4
03)CP01.JPG
04)SW
05)C:\Documents and Settings\shermanr\My Documents\Cactus\SPLP sampling
TDD\Cactus Photolog\CP01.JPG
06)1119
07)Robert
08)Sherman
09)Sarah
10)Hitchcock
11)1
12)01
#####END OF RECORD#####

#####START OF RECORD#####
01)08/30/2007
02)Grid B5 from node B5
03)CP02.JPG
04)SW
05)C:\Documents and Settings\shermanr\My Documents\Cactus\SPLP sampling
TDD\Cactus Photolog\CP02.JPG
06)1120
07)Robert
08)Sherman
09)Sarah
10)Hitchcock
11)1
12)02
#####END OF RECORD#####

#####START OF RECORD#####
01)08/30/2007
02)Grid C6 from node D6
03)CP03.JPG
04)NW
05)C:\Documents and Settings\shermanr\My Documents\Cactus\SPLP sampling
TDD\Cactus Photolog\CP03.JPG
06)1121
07)Robert
08)Sherman
09)Sarah
10)Hitchcock
11)1
12)03
#####END OF RECORD#####

#####START OF RECORD#####

01)08/30/2007
02)Looking East from node D6
03)CP04.JPG
04)E
05)C:\Documents and Settings\shermanr\My Documents\Cactus\SPLP sampling TDD\Cactus Photolog\CP04.JPG
06)1122
07)Robert
08)Sherman
09)Sarah
10)Hitchcock
11)1
12)04
#####END OF RECORD#####

#####START OF RECORD#####
01)08/30/2007
02)Looking East from node D6
03)CP05.JPG
04)E
05)C:\Documents and Settings\shermanr\My Documents\Cactus\SPLP sampling TDD\Cactus Photolog\CP05.JPG
06)1122
07)Robert
08)Sherman
09)Sarah
10)Hitchcock
11)1
12)05
#####END OF RECORD#####

#####START OF RECORD#####
01)08/30/2007
02)West (front) half of the site, taken from the ditch
03)CP06.JPG
04)W
05)C:\Documents and Settings\shermanr\My Documents\Cactus\SPLP sampling TDD\Cactus Photolog\CP06.JPG
06)1125
07)Robert
08)Sherman
09)Sarah
10)Hitchcock
11)1
12)06
#####END OF RECORD#####

#####START OF RECORD#####
01)08/30/2007
02)Back (East) half of the site, taken from the ditch
03)CP07.JPG
04)E
05)C:\Documents and Settings\shermanr\My Documents\Cactus\SPLP sampling TDD\Cactus Photolog\CP07.JPG
06)1126
07)Robert
08)Sherman

09)Sarah
10)Hitchcock
11)1
12)07
#####END OF RECORD#####

#####START OF RECORD#####
01)10/01/2007
02)Grid D1 from node E1
03)CP08.jpg
04)NW
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TDD\Cactus Photolog\CP08.jpg
06)1211
07)Robert
08)Sherman
09)Sarah
10)Hitchcock
11)1
12)08
#####END OF RECORD#####

#####START OF RECORD#####
01)10/01/2007
02)Grid C1 from node D1
03)CP09.jpg
04)NW
05)C:\Documents and Settings\shermanr\My Documents\Cactus\SPLP sampling
TDD\Cactus Photolog\CP09.jpg
06)1212
07)Robert
08)Sherman
09)Sarah
10)Hitchcock
11)1
12)09
#####END OF RECORD#####

#####START OF RECORD#####
01)10/01/2007
02)Grid A1 from node B1
03)CP10.jpg
04)NW
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TDD\Cactus Photolog\CP10.jpg
06)1213
07)Robert
08)Sherman
09)Sarah
10)Hitchcock
11)1
12)10
#####END OF RECORD#####

#####START OF RECORD#####
01)10/01/2007
02)Grid B6 from node B6

03)CP11.jpg
04)SW
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06)1215
07)Robert
08)Sherman
09)Sarah
10)Hitchcock
11)1
12)11
#####END OF RECORD#####

#####START OF RECORD#####
01)10/01/2007
02)Grid B7 from node B7
03)CP12.jpg
04)SW
05)C:\Documents and Settings\shermanr\My Documents\Cactus\SPLP sampling TDD\Cactus Photolog\CP12.jpg
06)1216
07)Robert
08)Sherman
09)Sarah
10)Hitchcock
11)1
12)12
#####END OF RECORD#####

#####START OF RECORD#####
01)10/01/2007
02)Grid A9 from node B8
03)CP13.jpg
04)NE
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06)1216
07)Robert
08)Sherman
09)Sarah
10)Hitchcock
11)1
12)13
#####END OF RECORD#####

#####START OF RECORD#####
01)10/01/2007
02)Grid B11 from node C10
03)CP14.jpg
04)NE
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06)1218
07)Robert
08)Sherman
09)Sarah
10)Hitchcock

11)1
12)14
#####END OF RECORD#####

#####START OF RECORD#####
01)10/01/2007
02)Grid A13 from node C11
03)CP15.jpg
04)NE
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TDD\Cactus Photolog\CP15.jpg
06)1218
07)Robert
08)Sherman
09)Sarah
10)Hitchcock
11)1
12)15
#####END OF RECORD#####

#####START OF RECORD#####
01)10/01/2007
02)Grid C9 from node C9
03)CP16.jpg
04)SW
05)C:\Documents and Settings\shermanr\My Documents\Cactus\SPLP sampling
TDD\Cactus Photolog\CP16.jpg
06)1220
07)Robert
08)Sherman
09)Sarah
10)Hitchcock
11)1
12)16
#####END OF RECORD#####

#####START OF RECORD#####
01)10/01/2007
02)Grid D11 from node D10
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TDD\Cactus Photolog\CP17.jpg
06)1221
07)Robert
08)Sherman
09)Sarah
10)Hitchcock
11)1
12)17
#####END OF RECORD#####

#####START OF RECORD#####
01)10/01/2007
02)Grid E11 from Grid E9
03)CP18.jpg
04)SE

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06)1222
07)Robert
08)Sherman
09)Sarah
10)Hitchcock
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06)1223
07)Robert
08)Sherman
09)Sarah
10)Hitchcock
11)1
12)19
#####END OF RECORD#####

#####START OF RECORD#####
01)10/01/2007
02)Grid F8 from node F8
03)CP20.jpg
04)SW
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07)Robert
08)Sherman
09)Sarah
10)Hitchcock
11)1
12)20
#####END OF RECORD#####

#####START OF RECORD#####
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06)1224
07)Robert
08)Sherman
09)Sarah
10)Hitchcock
11)1
12)21

#####END OF RECORD#####

#####START OF RECORD#####
01)10/01/2007
02)Grid E7 from node E7
03)CP22.jpg
04)SW
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06)1225
07)Robert
08)Sherman
09)Sarah
10)Hitchcock
11)1
12)22
#####END OF RECORD#####

#####START OF RECORD#####
01)10/01/2007
02)Grid D6 from node E6
03)CP23.jpg
04)NW
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06)1226
07)Robert
08)Sherman
09)Sarah
10)Hitchcock
11)1
12)23
#####END OF RECORD#####

#####START OF RECORD#####
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03)CP24.jpg
04)SW
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06)1226
07)Robert
08)Sherman
09)Sarah
10)Hitchcock
11)1
12)24
#####END OF RECORD#####

#####START OF RECORD#####
01)10/01/2007
02)Grid G6 from node H6
03)CP25.jpg
04)NW
05)C:\Documents and Settings\shermanr\My Documents\Cactus\SPLP sampling TDD\Cactus Photolog\CP25.jpg

06)1227
07)Robert
08)Sherman
09)Sarah
10)Hitchcock
11)1
12)25
#####END OF RECORD#####

#####START OF RECORD#####
01)10/01/2007
02)Grid D4 from node D4
03)CP26.jpg
04)SW
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06)1229
07)Robert
08)Sherman
09)Sarah
10)Hitchcock
11)1
12)26
#####END OF RECORD#####

#####START OF RECORD#####
01)10/01/2007
02)Grid F3 from node F3
03)CP27.jpg
04)SW
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TDD\Cactus Photolog\CP27.jpg
06)1230
07)Robert
08)Sherman
09)Sarah
10)Hitchcock
11)1
12)27
#####END OF RECORD#####

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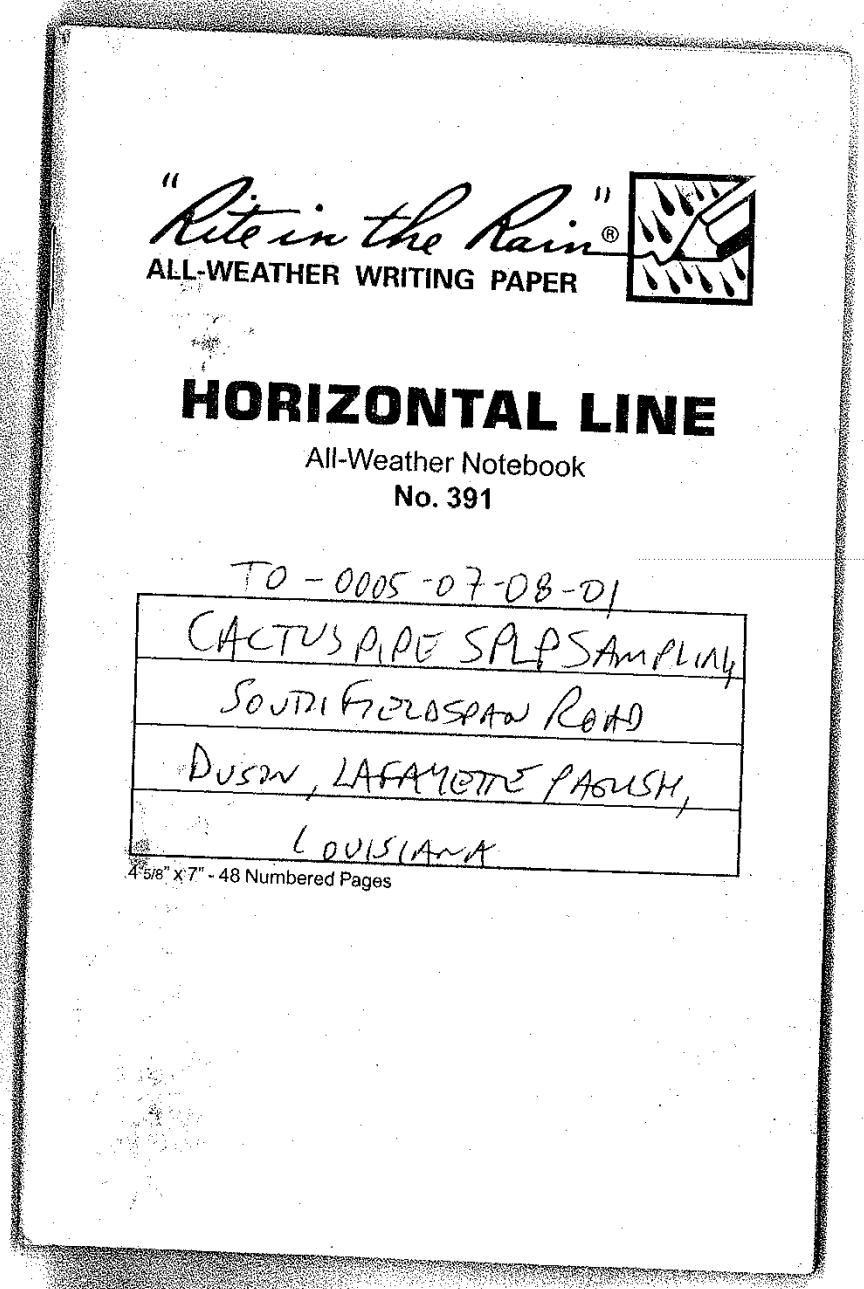
APPENDIX C

COPY OF START-3 LOGBOOK


"Rite in the Rain"®
ALL-WEATHER WRITING PAPER
HORIZONTAL LINE
All-Weather Notebook
No. 391
TO-0005-07-08-01
CACTUS PIPE SPLP SAMPLING
SOUTH FRONTAGE ROAD
DUSON, LAFAYETTE PARISH,
LOUISIANA
4 5/8" x 7" - 48 Numbered Pages

"Rite in the Rain"®
ALL-WEATHER WRITING PAPER

Name CACTUS PIPE SPLP

Address SOUTH FIGURSPAN ROAD
DUSON, LAFAYETTE PARISH, LOUISIANA

Phone

Project TO-0005-07-08-01

Clear Vinyl Protective Slipcovers (Item No. 30) are available for this style of notebook.
Helps protect your notebook from wear & tear. Contact your dealer or the J. L. Darling Corporation.

TO-0005-07-08-01

CONTENTS

PAGE	REFERENCE	DATE

AUG 30 2007 TO-0005-07-08-01
0630 START MEMBERS ROBERT SHERMAN AND ERIC HADWIN AT START OFFICE, FINISH PACKING
0655 DEPART FOR LAFAYETTE
0700 AT 0665 EQUIPMENT ROUTE GETTING BILLY GOAT BRUSH CUTTER + TRAILER
0740 AT OUTREACH OFFICE, MEETING SARAH HITCHCOCK
0750 DEPART OUTREACH FOR SITE
0800 AT SITE. SAFETY MEETING: WORK FOR TODAY: CLEAR BRUSH TO RELOCATE GRIDS, SAMPLE 3 GRIDS. CHECK MAP: LOAD. RAIN MAKES NORM, PHYS HAZARDS: SLIP/TRIP/FALL, SCRAP METAL, BRUSH CUTTING. BIO HAZARDS: SPIDERS, POISON IVY, SNAKES, INSECTS TL: ROBERT SHERMAN SSO: ERIK HADWIN SARAH HITCHCOCK
0810 START CLEARING BRUSH TO MOVE VEHICLE INSIDE OF FRONT GATE
0825 VEHICLE INSIDE FRONT GATE, UNPACKING TO GET GEAR.

TO-0005-07-08-01 AUG 30, 2007
0835 STARTS CLEARING GRASS TO TRY TO LOCATE GRID NODES C5 + B5
0915 HAVE LOCATED NODES C5 + B5, NOW MEASURING OUT TO GET THE REMAINING NODES NEEDED
1020 HAVE LOCATED NODES SURROUNDING GRIDS B4, B5, C6, & C7
1045 GETTING SAMPLE GEAR READY
1050 STARTING TO SAMPLE, WILL SAMPLE B4, B5, C6. X4 IS A DUPE OF B4
1107 HAVE COMPLETED SAMPLING
1110 PACKING TRUCK. SHERMAN + HADWIN WALKING SITE. FRONT HALF IS MOSTLY TALL GRASS AND WEEDS.
1125 BACK HALF OF SITE IS TALL TREES ~ 8-10 FEET TALL
1130 STARTS OFF SITE
1330 HADWIN + SHERMAN AT OFFICE, UNPACK, PREP SAMPLES
1550 SHERMAN DROPS OFF SAMPLES AT GCAL LAB

Aug 30, 2007 TO-0005-07-08-01

SAMPLE LOG

B4-SPLP	- GRID B4	8/30/2007	1100	Comp
B5-SPLP	- GRID B5	"	1105	"
C6-SPLP	- GRID C6	"	1107	"
X4-SPLP	- GRID B4	"	1100	"

ALL SAMPLES ANALYZED FOR TOTAL LOAD AND SPLP LOAD. SAMPLES PROCESSED WITH ICP. ALL SAMPLES COLLECTED AUG 30, 2007

TO-0005-07-08-01 Aug 30, 2007

PHOTOLOG - ALL PHOTOS ON DVCS

DATE COLLECTED AUG 30, 2007

PHOTO #	TIME	DIR	DESCRIPTION	PW
CP01	1119	SW	GRID B4 From B4	DS
CP02	1120	SW	GRID B5 From B5	DS
CP03	1121	NW	GRID C6 From D6	DS
CP04	1122	E	EAST From D6	DS
CP05	1122	E	" " "	"
CP06	1125	W	WEST ½ OF SITE From DITCH	DS
CP07	1126	E	BACK EAST HALF OF SITE From DITCH	DS

002157

SEPT 28 2007 TO-0005-07-08-01

0530 START MEMBERS ROBERT SHERMAN, ERIK HADWIN, AND LARRY HOWARD AT WESTON OFFICE.

0545 DEPART OFFICE FOR SAFETY SITE

0705 AT RONTH OFFICE TO PICK UP BILLYGOAT

0735 AT OUTREACH OFFICE, PICK UP SARAH HITCHCOCK.

0800 AT SITE. SITE SAFETY MEETING: WORK FOR TODAY: CLEAR BRUSH & RE-ESTABLISH THE GRIDS NEEDED FOR SAMPLING NEXT WEEK. CHEM HAZARDS: COPD RAD HAZARDS: NORM. PHYSICAL HAZ: SLIP/TRIP/FALL, SCRAP METAL, BRUSH CUTTING, SUNBURN BIO HAZARDS: POISON IVY, INSECTS, SNAKES, SPIDERS, INSECTS.

TL ROBERT SHERMAN

SSO SARAH HITCHCOCK

ERIK HADWIN

LARRY HOWARD

0815 BEGIN SETTING UP TOTAL STATION TO SURVEY IN B+C LINES NORTH END OF SITE USING BILLYGOAT BRUSH CUTTER TO CLEAR BRUSH AND MARK GRIDS

TO-0005-07-08-01 SEPT 28, 2007

0845 HAVE SETUP TOTAL STATION AT GRID NODE B4.

1015 CONTINUE CLEARING AND SURVEY

1215 BATTERY ON TOTAL STATION HAS DIED. WILL CONTINUE SURVEY USING TAPE MEASURES.

1300 BREAK FOR LUNCH

1325 RESUME SURVEY. HAVE COMPLETED WEST SIDE OF SITE, MOVING TO THE SOUTH EAST

1545 ~~HAVINTDS~~ HAVE FINISHED SURVEY FOR THE DAY. PACKING UP EQUIPMENT AND INSTRUMENTS

1600 DEPARTING SITE. HITCHCOCK WILL RETURN TOTAL STATION. OTHERS WILL RETURN BILLY GOAT.

1650 HAVE RETURNED BILLY GOAT, ON ROUTE TO BATON ROUGE.

1800 SHERMAN, HADWIN, AND HOWARD AT OFFICE, UNPACKING TRUCK

OCTOBER 1, 2007 TO-0005-07-08-01

0530 START MONROE ROBERT SHERMAN AND ELIZABETH DOOMES AT OFFICE, PACKING TRUCK. WORK FOR TODAY: SAMPLING SURFACE SOILS.

0600 DEPARTING OFFICE FOR LAFAYETTE.

0725 AT EPA OUTREACH OFFICE TO MEET SARAH HITCHCOCK

0745 DEPARTING OUTREACH OFFICE FOR SITE

0905 AT CALCASIEU PIPE SITE. SITE SAFETY MEETING: WORK FOR TODAY; SOIL SAMPLING. CHEM HAZARDS: LEAD. RADIATION HAZ: NORM PHYSICAL HAZARDS: SLIP/TRIP/FALL, SCRAP METAL, BRUSH, SUNBURN. BIOLOGICAL HAZ: SNAKES, SPIDERS, MOSQUITOES, INSECTS

ROBERT W SHERMAN

ELIZABETH DOOMES

SARAH MITCHCOCK

0915 STARTING TO TRY TO RECREATE SOME ADDITIONAL GRID NODES

0945 HAVE COMPLETED RECREATING THE GRID NODES, ~~WILL~~ PREPARING TO COLLECT SAMPLES

TO-0005-07-08-01 OCTOBER 1, 2007

1000 BEGINNING TO SAMPLE SOIL CORES

1200 HAVE COMPLETED SAMPLING, PROCESSING SAMPLES

1250 DEPARTING SITE

1300 AT OUTREACH OFFICE, CONTINUE PROCESSING SAMPLES

1410 DEPARTING OUTREACH OFFICE FOR BATON ROUGE

1518 DROPPING SAMPLES OFF AT GULF COAST ANALYTICAL LABORATORY

1550 AT OFFICE IN B.R. UNPACKING TRUCK.

October 1 2007 TO-0005-07-08-01

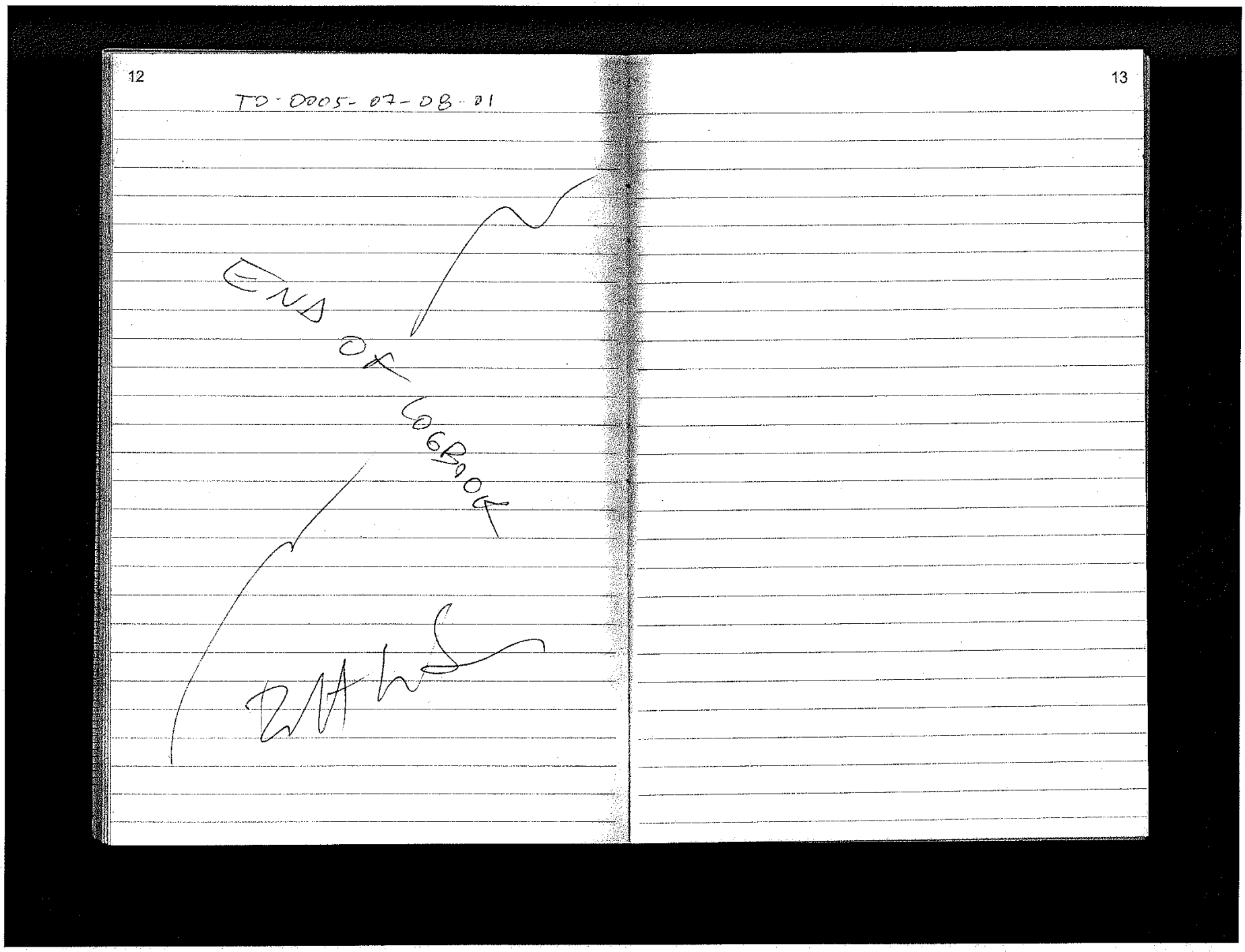
PHOTOLOG - PHOTOS TAKEN Oct 1, 2007

PHOTO#	Time	D,R	Description	P/W
CP08	1211	NW	Grid D1 From Node E1	RS
CP09	1212	NW	Grid C1 From D1	RS
CP10	1213	NW	Grid A1 From B1	RS
CP11	1215	SW	Grid B6 From B6	RS
CP12	1216	SW	Grid B7 From Node B7	RS
CP13	1216	NE	Grid A9 From Node B8	RS
CP14	1218	NE	Grid B11 From Node C10	RS
CP15	1218	NE	Grid A13 From Node C11	RS
CP16	1220	SW	Grid C9 From Node C9	RS
CP17	1221	SE	Grid D11 From Node D10	RS
CP18	1222	SE	Grid E11 From Node E9	RS
CP19	1223	SW	Grid F9 From Node F9	RS
CP20	1223	SW	Grid F8 From Node F8	RS
CP21	1224	NE	Grid D8 From Node E7	RS
CP22	1225	SW	Grid E7 From Node E7	RS
CP23	1226	NW	Grid D6 From Node E6	RS
CP24	1226	SW	Grid F6 From Node F6	RS
CP25	1227	NW	Grid G6 From Node G6	RS
CP26	1229	SW	Grid D4 From Node D4	RS
CP27	1230	SW	Grid F3 From Node F3	RS

TO-0005-07-08-01 October 1 07

SAMPLE LOG - Oct 1, 2007 THE SAMPLES COMPOSITES COLLECTED TODAY

Time	Grid	Analysis
1000	C1	Total Pb, SPLP Pb
1005	D1	Total Pb
1008	A1	Total Pb
1027	D4	Total Pb
1027	X3	Total Pb - duplicate of D4
1030	F3	Total Pb, SPLP Pb
1040	F6	Total Pb
1042	G6	Total Pb, SPLP Pb
1101	B6	Total Pb
1105	D6	Total Pb
1107	E7	Total Pb
1107	B7	total Pb
1130	F9	Total Pb
1130	C11	Total Pb
1133	F8	Total Pb, SPLP Pb
1143	D8	Total Pb, SPLP Pb
1143	X2	Total Pb, SPLP Pb, dupe of D8
1145	A9	Total Pb
1145	C9	Total Pb
1153	B11	Total Pb
1156	D11	Total Pb
1159	A13	Total Pb


12
TO-0005-07-08-01
13
END OF LOGBOOK

APPENDIX D

ANALYTICAL DATA VALIDATION

DATA QUALITY ASSURANCE REVIEW

SITE NAME	Cactus Pipe		
WORK ORDER NUMBER	20406.012.005.0211.01	TDD NUMBER	TO-0005-07-08-01
PROJECT NUMBER		SDG NUMBER	207083044

Weston Solutions, Inc. (WESTON®) has completed a QA review for Work Order Number 20406.012.005.0211.01, SDG No. 207083044, (Cactus Pipe). Four samples were analyzed for total lead and SPLP lead by Gulf Coast Analytical Laboratories (GCAL). Sample numbers are listed below.

SAMPLE NUMBERS

B4-SPLP	B5-SPLP	C6-SPLP
X4-SPLP	B4-SPLP (SPLP)	B5-SPLP (SPLP)
C6-SPLP (SPLP)	X4-SPLP (SPLP)	

This data package was validated to determine if Quality Control (QC) specifications were achieved, following *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review* (October, 1999), *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (July, 2002), *USEPA Contract Laboratory Program National Functional Guidelines for Chlorinated Dioxin/Furan Data Review* (August, 2002), *Quality Assurance/Quality Control Guidance for Removal Activities* (April, 1990), and the Regional Protocol for Holding Times, Blanks, and VOA Preservation (April 13, 1989). Specific data qualifications are listed in the following discussion.

REVIEWER	Gloria J. Switalski	DATE	October 11, 2007

Data Qualifiers

Data Qualifier Definitions were supplied by the Office of Solid Waste and Emergency Response (September 1989) and are included in the Functional Guidelines. Data qualifiers may be combined (UJ, QJ) with the corresponding combination of meanings. Additional qualifier may be added to provide additional, more specific information (JL, UB, QJK), modifying the meaning of the primary qualifier. Addition qualifiers utilized by WESTON are H, L, K, B, Q, and D.

U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation or detection limit, which has been adjusted for sample weight/sample volume, extraction volume, percent solids, sample dilution or other analysis specific parameters.

An additional qualifier, "B", may be appended to indicate that while the analyte was detected in the sample, the presence of the analyte may be attributable to blank contamination and the analyte is therefore considered undetected with the sample detection or quantitation limit for the analyte being elevated.

J - The analyte was analyzed for, but the associated numerical value may not be consistent with the amount actually present in the environmental sample or may not be consistent with the sample detection or quantitation limit. The value is an estimated quantity. The data should be seriously considered for decision-making and are usable for many purposes.

An additional qualifier will be appended to the "J" qualifier that indicates the bias in the reported results:

L Low bias

H High bias

K Unknown bias

Q The reported concentration is less than the sample quantitation limit for the specific analyte in the sample.

The L and H qualifier will only be employed when a single qualification is required. When more than one quality control parameter affects the analytical result and a conflict results in assigning a bias, the result will be flagged JK.

R - Quality Control indicates that data are unusable for all purposes. The analyte was analyzed for, but the presence or absence of the analyte has not been verified. Resampling and reanalysis are necessary for verification to confirm or deny the presence of an analyte.

N - The analysis indicates the presence of analyte for which there is presumptive evidence to make a "tentative identification."

D - The concentration reported was determined in the re-analysis of the sample at a secondary dilution.

METALS DATA EVALUATION

1. Analytical Method:

Samples were prepared and analyzed for lead using the procedures specified in **SW-846 Method 6010B.** Synthetic Precipitation Leaching Procedure (SPLP) samples were extracted prior to digestion using the procedures specified in **SW-846 Method 1312.**

2. Holding Times:

All samples met established holding time criteria of 180 days for metals.

3. Initial Calibration:

ICP initial calibration included a blank and one standard and initial calibration verification results fell within the control limits of 90 to 110 percent of the true values.

4. Continuing Calibration:

All ICP results fell within the control limits of 90% to 110% of the true values.

5. CRDL Standard:

All results for the CRDL standard were within the control limits of 70% to 130% of the true values or the sample results were greater than the CRDL action level.

6. Blanks:

A. Laboratory Blanks:

No target analytes were detected in the calibration and preparation blanks associated with this analytical package or the sample results were greater than the blank action concentration.

B. Field Blanks:

No field blanks were submitted in this analytical package.

7. ICP Interference Check:

All results for the Interference Check Sample were within the control limits of 80% to 120% of the true values.

8. Laboratory Control Sample (LCS):

The recoveries for the LCS were within the 80-120% control limit.

9. Duplicate Sample Analysis:

A. Laboratory Duplicate Analysis:

Sample B4-SPLP underwent duplicate analysis for the soil matrix. Sample B4-SPLP (SPLP) underwent duplicate analysis for the SPLP (aqueous) matrix. The Relative Percent Difference (RPD) values for the duplicate sample analysis were within QC criteria of less than 20% for aqueous samples and less than 35% for solid samples for concentrations greater than five times the reporting limit (RL). For sample concentrations less than five times the RL, the QC criteria are within ± the RL for the water matrix or ± two times the RL for the soil matrix.

B. Field Duplicate Analysis:

The following sample pair was submitted as field duplicates for the soil and SPLP matrix: B4-SPLP/X4-SPLP. QC criteria are that the Relative Percent Difference (RPD) values for the field duplicate sample analysis be less than 30% for aqueous samples and less than 50% for solid samples for concentrations greater than five times the RL. For sample concentrations less than five times the RL, the QC criteria is that the absolute difference between the samples is less than two times the RL for aqueous samples or 3.5 times the RL for the soil matrix. QC criteria were not met for the following analyte:

FIELD DUPLICATE SAMPLE PAIR	ANALYTE	MATRIX	RPD	AFFECTED SAMPLES	QUALIFIER FLAG
B4-SPLP/X4-SPLP	Lead	SPLP (aqueous)	58.8	B4-SPLP/X4-SPLP	JK

10. Spiked Sample Analysis:

Sample B4-SPLP underwent spike analysis for the soil matrix. Sample B4-SPLP (SPLP) underwent spike analysis for the SPLP (aqueous) matrix. The spike recoveries for all analytes were within the control limit of 75% to 125% or the sample concentration exceeded the spike concentration by a factor of 4 times or more.

11. ICP Serial Dilution:

Samples B4-SPLP and B4-SPLP (SPLP) underwent serial dilution. The Percent Difference (%D) values for ICP serial dilution analysis were within the QC limits of 10% for all analytes with concentrations greater than 50 times their instrument detection limit (IDL).

12. Sample Quantitation and RLs

Concentrations of all reported analytes were correctly calculated.

All samples for total lead were analyzed at a five-fold dilution.

13. Laboratory Contact

No laboratory contact was required.

14. Overall Assessment:

Detected SPLP lead results in samples B4-SPLP (SPLP) and X4-SPLP (SPLP) were estimated due to high field duplicate RPD.

The analytical data is acceptable for use with the qualifications listed above.

Weston Solutions, Inc
4324 S. Sherwood Forest Blvd. Suite B100
Baton Rouge, La
Contact: Kristie Kettler/713-985-6636

CHAIN OF CUSTODY RECORD
Site #: LA0000605278

No: LA0000605278-08/30/07-0001
Lab: GCAL
Lab Address: 7979 GSRI Ave., Baton Rouge, La 70802
Lab Contact: Anna Kinchen

Lab #	Sample #	Location	Analyses	Collected	Sample Time	Matrix	Numb Cont	Container	Preservative
	B4-SPLP	grid B4	Pb SPLP + Total Pb	8/30/2007	11:00	Soil	1	8 oz glass	4 C
	B5-SPLP	grid B5	Pb SPLP + Total Pb	8/30/2007	11:05	Soil	1	8 oz glass	4 C
	C6-SPLP	grid C6	Pb SPLP + Total Pb	8/30/2007	11:07	Soil	1	8 oz glass	4 C
	X4-SPLP	grid X4	Pb SPLP + Total Pb	8/30/2007	11:00	Soil	1	8 oz glass	4 C

Special Instructions: e-mail results to robert.sherman@westonsolutions.com

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	[signature]	8/30/07	[signature]	8.30.07	1550						

bc

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL | Sample ID: B4-SPLP

Lab Code: LA024 | Case No.: | Contract:

Matrix: (soil / water) Soil | SAS No.: | SDG No.: 207083044

Level: (low / med) | % Solids: 85.28 | Lab Sample ID: 20708304401

Date Received: 08/30/07 | Time: 1558 | Date Collected: 08/30/07 | Time: 1100

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	785	mg/kg		0.33	3.52	SW-846 6010B	P

FORM I - IN

8 10/9/A

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL | Sample ID: B5-SPLP

Lab Code: LA024 | Case No.: | Contract:

Matrix: (soil / water) Soil | SAS No.: | SDG No.: 207083044

Level: (low / med) | % Solids: 93.07 | Lab Sample ID: 20708304402

Date Received: 08/30/07 | Time: 1558 | Date Collected: 08/30/07 | Time: 1105

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	710	mg/kg		0.31	3.22	SW-846 6010B	P

FORM I - IN

8/10/07

7

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL | Sample ID: C6-SPLP

Lab Code: LA024 | Case No.: | Contract:

Matrix: (soil / water) Soil | SAS No.: | SDG No.: 207083044

Level: (low / med) | % Solids: 91.01 | Lab Sample ID: 20708304403

Date Received: 08/30/07 | Time: 1558 | Date Collected: 08/30/07 | Time: 1107

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	3930	mg/kg		0.31	3.30	SW-846 6010B	P

FORM I - IN

10/9/7

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL | Sample ID: X4-SPLP

Lab Code: LA024 | Case No.: | Contract:

Matrix: (soil / water) Soil | SAS No.: | SDG No.: 207083044

Level: (low / med) | % Solids: 84.76 | Lab Sample ID: 20708304404

Date Received: 08/30/07 | Time: 1558 | Date Collected: 08/30/07 | Time: 1100

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	768	mg/kg		0.33	3.51	SW-846 6010B	P

FORM I - IN

9/10/9/7

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL
Sample ID: B4-SPLP (SPLP)
Lab Code: LA024
Case No.:
Contract:
Matrix: (soil / water) Soil
SAS No.:
SDG No.: 207083044
Level: (low / med)
% Solids:
Lab Sample ID: 20708304405
Date Received: 08/30/07
Time: 1558
Date Collected: 08/30/07
Time: 1100

Analyte	Concentration	Units	C	MDL	PQL	Method	Type	
Lead	0.12	mg/L		0.0018	0.015	SW-846 1312/6010B	P	JK

FORM I - IN

10/9/7

10

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL | Sample ID: B5-SPLP (SPLP)

Lab Code: LA024 | Case No.: | Contract:

Matrix: (soil / water) Soil | SAS No.: | SDG No.: 207083044

Level: (low / med) | % Solids: | Lab Sample ID: 20708304406

Date Received: 08/30/07 | Time: 1558 | Date Collected: 08/30/07 | Time: 1105

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	0.095	mg/L		0.0018	0.015	SW-846 1312/6010B	P

FORM I - IN

10/9/7

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL | Sample ID: C6-SPLP (SPLP)

Lab Code: LA024 | Case No.: | Contract:

Matrix: (soil / water) Soil | SAS No.: | SDG No.: 207083044

Level: (low / med) | % Solids: | Lab Sample ID: 20708304407

Date Received: 08/30/07 | Time: 1558 | Date Collected: 08/30/07 | Time: 1107

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	1.61	mg/L		0.0018	0.015	SW-846 1312/6010B	P

FORM I - IN

8/10/5/M

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL Sample ID: X4-SPLP (SPLP)

Lab Code: LA024 Case No.: Contract:

Matrix: (soil / water) Soil SAS No.: SDG No.: 207083044

Level: (low / med) % Solids: Lab Sample ID: 20708304408

Date Received: 08/30/07 Time: 1558 Date Collected: 08/30/07 Time: 1100

Analyte	Concentration	Units	C	MDL	PQL	Method	Type	
Lead	0.22	mg/L		0.0018	0.015	SW-846 1312/6010B	P	JK

FORM I - IN

10/9/07

DATA QUALITY ASSURANCE REVIEW

SITE NAME Cactus Pipe

WORK ORDER NUMBER 20406.012.005.0211.01 TDD NUMBER TO-0005-07-08-01

PROJECT NUMBER SDG NUMBER 207100126

Weston Solutions, Inc. (WESTON®) has completed a QA review for Work Order Number 20406.012.005.0211.01, SDG No. 207100126, (Cactus Pipe). Twenty two samples were analyzed for total lead and six samples were analyzed for SPLP lead by Gulf Coast Analytical Laboratories (GCAL). Sample numbers are listed below.

SAMPLE NUMBERS

B-6	E-7	B-7
E-11	F-6	D-11
B-11	X-2	C-9
F-8	D-8	F-9
A-9	D-1	G-6
A-1	X-3	C-1
A-13	F-3	D-6
D-4	X-2 (SPLP)	F-8 (SPLP)
D-8 (SPLP)	G-6 (SPLP)	C-1 (SPLP)
F-3 (SPLP)		

This data package was validated to determine if Quality Control (QC) specifications were achieved, following *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review* (October, 1999), *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (July, 2002), *USEPA Contract Laboratory Program National Functional Guidelines for Chlorinated Dioxin/Furan Data Review* (August, 2002), *Quality Assurance/Quality Control Guidance for Removal Activities* (April, 1990), and the Regional Protocol for Holding Times, Blanks, and VOA Preservation (April 13, 1989). Specific data qualifications are listed in the following discussion.

REVIEWER Gloria J. Switalski DATE October 16, 2007

Data Qualifiers

Data Qualifier Definitions were supplied by the Office of Solid Waste and Emergency Response (September 1989) and are included in the Functional Guidelines. Data qualifiers may be combined (UJ, QJ) with the corresponding combination of meanings. Additional qualifier may be added to provide additional, more specific information (JL, UB, QJK), modifying the meaning of the primary qualifier. Addition qualifiers utilized by WESTON are H, L, K, B, Q, and D.

U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation or detection limit, which has been adjusted for sample weight/sample volume, extraction volume, percent solids, sample dilution or other analysis specific parameters.

An additional qualifier, "B", may be appended to indicate that while the analyte was detected in the sample, the presence of the analyte may be attributable to blank contamination and the analyte is therefore considered undetected with the sample detection or quantitation limit for the analyte being elevated.

J - The analyte was analyzed for, but the associated numerical value may not be consistent with the amount actually present in the environmental sample or may not be consistent with the sample detection or quantitation limit. The value is an estimated quantity. The data should be seriously considered for decision-making and are usable for many purposes.

An additional qualifier will be appended to the "J" qualifier that indicates the bias in the reported results:

L Low bias

H High bias

K Unknown bias

Q The reported concentration is less than the sample quantitation limit for the specific analyte in the sample.

The L and H qualifier will only be employed when a single qualification is required. When more than one quality control parameter affects the analytical result and a conflict results in assigning a bias, the result will be flagged JK.

R - Quality Control indicates that data are unusable for all purposes. The analyte was analyzed for, but the presence or absence of the analyte has not been verified. Resampling and reanalysis are necessary for verification to confirm or deny the presence of an analyte.

N - The analysis indicates the presence of analyte for which there is presumptive evidence to make a "tentative identification."

D - The concentration reported was determined in the re-analysis of the sample at a secondary dilution.

METALS DATA EVALUATION

1. Analytical Method:

Samples were prepared and analyzed for lead using the procedures specified in **SW-846 Method 6010B.** Synthetic Precipitation Leaching Procedure (SPLP) samples were extracted prior to digestion using the procedures specified in **SW-846 Method 1312.**

2. Holding Times:

All samples met established holding time criteria of 180 days for metals.

3. Initial Calibration:

ICP initial calibration included a blank and one standard and initial calibration verification results fell within the control limits of 90 to 110 percent of the true values.

4. Continuing Calibration:

All ICP results fell within the control limits of 90% to 110% of the true values.

5. CRDL Standard:

All results for the CRDL standard were within the control limits of 70% to 130% of the true values or the sample results were greater than the CRDL action level.

6. Blanks:

A. Laboratory Blanks:

No target analytes were detected in the calibration and preparation blanks associated with this analytical package or the sample results were greater than the blank action concentration.

B. Field Blanks:

No field blanks were submitted in this analytical package.

7. ICP Interference Check:

All results for the Interference Check Sample were within the control limits of 80% to 120% of the true values.

8. Laboratory Control Sample (LCS):

The recoveries for the LCS were within the 80-120% control limit.

9. Duplicate Sample Analysis:

A. Laboratory Duplicate Analysis:

Samples B-6 and A-9 underwent duplicate analysis for the soil matrix. Sample X-2 (SPLP) underwent duplicate analysis for the SPLP (aqueous) matrix. The Relative Percent Difference (RPD) values for the duplicate sample analysis were within QC criteria of less than 20% for aqueous samples and less than 35% for solid samples for concentrations greater than five times the reporting limit (RL). For sample concentrations less than five times the RL, the QC criteria are within ± the RL for the water matrix or ± two times the RL for the soil matrix.

B. Field Duplicate Analysis:

The following sample pairs were submitted as field duplicates for the soil matrix: X2/D8 and X3/D4. The following sample pair was submitted as field duplicates for the SPLP (aqueous) matrix: X2 (SPLP)/D8 (SPLP). QC criteria are that the RPD values for the field duplicate sample analysis be less than 30% for aqueous samples and less than 50% for solid samples for concentrations greater than five times the RL. For sample concentrations less than five times the RL, the QC criteria is that the absolute difference between the samples is less than two times the RL for aqueous samples or 3.5 times the RL for the soil matrix. QC criteria were not met for the following analyte:

FIELD DUPLICATE SAMPLE PAIR	ANALYTE	MATRIX	CONCENTRATION (RL)	AFFECTED SAMPLES	QUALIFIER FLAG
X2 (SPLP)/D8 (SPLP)	Lead	SPLP (aqueous)	0.032/0.077 (0.015)	X2 (SPLP)/D8 (SPLP)	JK

10. Spiked Sample Analysis:

Samples B-6 and A-9 underwent spike analysis for the soil matrix. Sample X-2 (SPLP) underwent spike analysis for the SPLP (aqueous) matrix. The spike recoveries for all analytes were within the control limit of 75% to 125% or the sample concentration exceeded the spike concentration by a factor of 4 times or more.

11. ICP Serial Dilution:

Samples B-6, A-9, and X-2 (SPLP) underwent serial dilution. The Percent Difference (%D) values for ICP serial dilution analysis were within the QC limits of 10% for all analytes with concentrations greater than 50 times their instrument detection limit (IDL).

12. Sample Quantitation and RLs

Concentrations of all reported analytes were correctly calculated.

All samples for total lead were analyzed at a five-fold dilution except for D-4 which was analyzed at a 10-fold dilution.

13. Laboratory Contact

No laboratory contact was required.

14. Overall Assessment:

Detected SPLP lead results in samples X2 (SPLP) and D8 (SPLP) were estimated due to field duplicate variability.

The analytical data is acceptable for use with the qualifications listed above.

GCAL

GULF COAST ANALYTICAL LABORATORIES, INC.
7979 GSRI Avenue, Baton Rouge, Louisiana 70820-7402
Phone 225.769.4900 • Fax 225.767.5717

CHAIN OF CUSTODY RECORD

Lab use only

Client Name	Client #	Workorder #	Due Date

Report to:
Client: Weston Solutions
Address:
Contact: Robert Sherman
Phone: 225-578-4785
Fax:

Bill to:
Client: Weston Solutions
Address:
Contact: Paige Hutton
Phone:
Fax:

P.O. Number
Project Name/Number: Cactus Pipe
Sampled By: Bill Sun / Elizabeth Downs

Analytical Requests & Method

Lab use only:
Custody Seal used ☐ yes ☐ no
in tact ☐ yes ☐ no
Temperature °C 6

Matrix[1]	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No Containers	TCLP Lead	SPLP Lead	Lab ID
S	12/11/07	1115	X		A 9	Ice	1	✓		1
S	12/11/07	1205	X		D 1	Ice	1	✓		2
S	12/11/07	1042	X		G 6	Ice	1	✓	✓	3
S	12/11/07	1003	X		A 1	Ice	1	✓		4
S	12/11/07	1027	X		X 3	Ice	1	✓		5
S	12/11/07	1000	X		C 1	Ice	1	✓	✓	6
S	12/11/07	1159	X		A 13	Ice	1	✓		7
S	12/11/07	1030	X		F 3	Ice	1	✓	✓	8
S	12/11/07	1105	X		D 6	Ice	1	✓		9
S	12/11/07	1027	X		D 4	Ice	1	✓		10

Remarks:

Turn Around Time: ☑ 24-48 hrs. ☐ 3 days ☐ 1 week ☐ Standard ☐ Other

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
		12-12-07	15:15
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Note:

By submitting these samples, you agree to the terms and conditions contained in our most recent schedule of services.

Matrix[1]: W = water, S = soil, SD = solid, L = liquid, SL = sludge, o = oil, CT = charcoal tube, A = air bag

We cannot accept verbal changes. Please fax written changes to (225) 767-5717

WHITE: CLIENT FINAL REPORT — CANARY: LABORATORY — PINK: CLIENT

GCAL 06 11/98

002182

GCAL

GULF COAST ANALYTICAL LABORATORIES, INC
7979 GSRI Avenue, Baton Rouge, Louisiana 70820-7402
Phone 225.769.4900 • Fax 225.767.5717

CHAIN OF CUSTODY RECORD

Lab use only

Client Name | Client # | Workorder # | Due Date

Report to:
Client: Weston Solutions
Address:
Contact: Robert Sherman
Phone: 225-578-9725
Fax:

Bill to:
Client: Weston Solutions
Address:
Contact: Krista Kotten
Phone:
Fax:

P.O. Number

Project Name/Number: Cactus Pipe

Sampled By: Robert Sherman / Elizabeth Downes

Analytical Requests & Method: Total Lead; SPLP Lead

Lab use only:
Custody Seal
used ☐ yes ☐ no
in tact ☐ yes ☐ no
Temperature °C 6

Matrix[1]	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No Containers	Total Lead	SPLP Lead	Remarks:	Lab ID
S	11/1/12	1101	X		B-6	ICE	1	✓			
S	11/1/12	1107	X		E-7	ICE	1	✓			
S	11/1/12	1117	X		B-7	ICE	1	✓			
S	11/1/12	1130	X		E-11	ICE	1	✓			
S	11/1/12	1140	X		F-6	ICE	1	✓			
S	11/1/12	1156	X		D-11	ICE	1	✓			
S	11/1/12	1183	X		B-11	ICE	1	✓			
S	11/1/12	1143	X		X-2	ICE	1	✓	✓		
S	11/1/12	1145	X		C-9	ICE	1	✓			
S	11/1/12	1153	X		F-3	ICE	1	✓	✓		
S	11/1/12	1148	X		D-5	ICE	1	✓	✓		
S	11/1/12	1130	X		F-9	ICE	1	✓			

Turn Around Time: ☑ 24-48 hrs. ☐ 3 days ☐ 1 week ☐ Standard ☐ Other

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	[signature]	11/2/12	1515
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Note:

By submitting these samples, you agree to the terms and conditions contained in our most recent schedule of services.

Matrix: W - water, S - soil, SD - solid, L - liquid, SL - sludge, A - air, O - oil, C - charcoal tube, B - air bag

We cannot accept verbal changes. Please fax written changes to (225) 767-5717

WHITE: CLIENT FINAL REPORT — CANARY: LABORATORY — PINK: CLIENT

GCAL-06 11/98

002183

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL
Sample ID: B-6

Lab Code: LA024 Case No.:
Contract:

Matrix: (soil / water) Soil
SAS No.: SDG No.: 207100126

Level: (low / med) % Solids: 85.05
Lab Sample ID: 20710012601

Date Received: 10/01/07 Time: 1518
Date Collected: 10/01/07 Time: 1101

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	660	mg/kg		0.34	3.53	SW-846 6010B	P

8 10/16/7

FORM I - IN

7

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL | Sample ID: E-7

Lab Code: LA024 | Case No.: | Contract:

Matrix: (soil / water) Soil | SAS No.: | SDG No.: 207100126

Level: (low / med) | % Solids: 84.33 | Lab Sample ID: 20710012602

Date Received: 10/01/07 | Time: 1518 | Date Collected: 10/01/07 | Time: 1107

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	1560	mg/kg		0.34	3.56	SW-846 6010B	P

FORM I - IN

10/16/7

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL
Sample ID: B-7
Lab Code: LA024
Case No.:
Contract:
Matrix: (soil / water) Soil
SAS No.:
SDG No.: 207100126
Level: (low / med)
% Solids: 83.50
Lab Sample ID: 20710012603
Date Received: 10/01/07
Time: 1518
Date Collected: 10/01/07
Time: 1107

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	4370	mg/kg		0.34	3.56	SW-846 6010B	P

FORM I - IN

10/16/4

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL | Sample ID: E-11

Lab Code: LA024 | Case No.: | Contract:

Matrix: (soil / water) Soil | SAS No.: | SDG No.: 207100126

Level: (low / med) | % Solids: 79.90 | Lab Sample ID: 20710012604

Date Received: 10/01/07 | Time: 1518 | Date Collected: 10/01/07 | Time: 1130

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	3240	mg/kg		0.36	3.75	SW-846 6010B	P

FORM I - IN

8/10/16/7

10

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL
Sample ID: F-6
Lab Code: LA024
Case No.:
Contract:
Matrix: (soil / water) Soil
SAS No.:
SDG No.: 207100126
Level: (low / med)
% Solids: 80.83
Lab Sample ID: 20710012605
Date Received: 10/01/07
Time: 1518
Date Collected: 10/01/07
Time: 1040

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	1080	mg/kg		0.35	3.68	SW-846 6010B	P

FORM I - IN

10/16/07

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL | Sample ID: D-11

Lab Code: LA024 | Case No.: | Contract:

Matrix: (soil / water) Soil | SAS No.: | SDG No.: 207100126

Level: (low / med) | % Solids: 78.89 | Lab Sample ID: 20710012606

Date Received: 10/01/07 | Time: 1518 | Date Collected: 10/01/07 | Time: 1156

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	4000	mg/kg		0.36	3.80	SW-846 6010B	P

FORM I - IN

BB 10/16/7

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL | Sample ID: B-11

Lab Code: LA024 | Case No.: | Contract:

Matrix: (soil / water) Soil | SAS No.: | SDG No.: 207100126

Level: (low / med) | % Solids: 84.55 | Lab Sample ID: 20710012607

Date Received: 10/01/07 | Time: 1518 | Date Collected: 10/01/07 | Time: 1153

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	801	mg/kg		0.33	3.52	SW-846 6010B	P

FORM I - IN

10/16/07

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL | Sample ID: X-2

Lab Code: LA024 | Case No.: | Contract:

Matrix: (soil / water) Soil | SAS No.: | SDG No.: 207100126

Level: (low / med) | % Solids: 84.61 | Lab Sample ID: 20710012608

Date Received: 10/01/07 | Time: 1518 | Date Collected: 10/01/07 | Time: 1143

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	1310	mg/kg		0.34	3.55	SW-846 6010B	P

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10/16/7

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL | Sample ID: C-9

Lab Code: LA024 | Case No.: | Contract:

Matrix: (soil / water) Soil | SAS No.: | SDG No.: 207100126

Level: (low / med) | % Solids: 76.94 | Lab Sample ID: 20710012609

Date Received: 10/01/07 | Time: 1518 | Date Collected: 10/01/07 | Time: 1145

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	2140	mg/kg		0.37	3.87	SW-846 6010B	P

FORM I - IN

10/10/7

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL | Sample ID: F-8

Lab Code: LA024 | Case No.: | Contract:

Matrix: (soil / water) Soil | SAS No.: | SDG No.: 207100126

Level: (low / med) | % Solids: 79.36 | Lab Sample ID: 20710012610

Date Received: 10/01/07 | Time: 1518 | Date Collected: 10/01/07 | Time: 1133

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	3420	mg/kg		0.36	3.78	SW-846 6010B	P

FORM I - IN

10/16/07

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL | Sample ID: D-8

Lab Code: LA024 | Case No.: | Contract:

Matrix: (soil / water) Soil | SAS No.: | SDG No.: 207100126

Level: (low / med) | % Solids: 87.75 | Lab Sample ID: 20710012611

Date Received: 10/01/07 | Time: 1518 | Date Collected: 10/01/07 | Time: 1143

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	1540	mg/kg		0.32	3.42	SW-846 6010B	P

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10/16

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL | Sample ID: F-9

Lab Code: LA024 | Case No.: | Contract:

Matrix: (soil / water) Soil | SAS No.: | SDG No.: 207100126

Level: (low / med) | % Solids: 83.18 | Lab Sample ID: 20710012612

Date Received: 10/01/07 | Time: 1518 | Date Collected: 10/01/07 | Time: 1130

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	1200	mg/kg		0.34	3.58	SW-846 6010B	P

FORM I - IN

10/10/12

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL | Sample ID: A-9

Lab Code: LA024 | Case No.: | Contract:

Matrix: (soil / water) Soil | SAS No.: | SDG No.: 207100126

Level: (low / med) | % Solids: 76.69 | Lab Sample ID: 20710012613

Date Received: 10/01/07 | Time: 1518 | Date Collected: 10/01/07 | Time: 1145

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	1790	mg/kg		0.37	3.91	SW-846 6010B	P

FORM I - IN

10/16/9

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL Sample ID: D-1

Lab Code: LA024 Case No.: Contract:

Matrix: (soil / water) Soil SAS No.: SDG No.: 207100126

Level: (low / med) % Solids: 80.20 Lab Sample ID: 20710012614

Date Received: 10/01/07 Time: 1518 Date Collected: 10/01/07 Time: 1005

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	1220	mg/kg		0.35	3.71	SW-846 6010B	P

FORM I - IN

10/16/7

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL
Sample ID: G-6
Lab Code: LA024
Case No.:
Contract:
Matrix: (soil / water) Soil
SAS No.:
SDG No.: 207100126
Level: (low / med)
% Solids: 86.19
Lab Sample ID: 20710012615
Date Received: 10/01/07
Time: 1518
Date Collected: 10/01/07
Time: 1042

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	912	mg/kg		0.33	3.45	SW-846 6010B	P

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10/16/7

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL Sample ID: A-1

Lab Code: LA024 Case No.: Contract:

Matrix: (soil / water) Soil SAS No.: SDG No.: 207100126

Level: (low / med) % Solids: 82.58 Lab Sample ID: 20710012616

Date Received: 10/01/07 Time: 1518 Date Collected: 10/01/07 Time: 1008

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	760	mg/kg		0.35	3.63	SW-846 6010B	P

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INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL Sample ID: X-3

Lab Code: LA024 Case No.: Contract:

Matrix: (soil / water) Soil SAS No.: SDG No.: 207100126

Level: (low / med) % Solids: 82.74 Lab Sample ID: 20710012617

Date Received: 10/01/07 Time: 1518 Date Collected: 10/01/07 Time: 1027

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	1020	mg/kg		0.34	3.63	SW-846 6010B	P

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INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL Sample ID: C-1

Lab Code: LA024 Case No.: Contract:

Matrix: (soil / water) Soil SAS No.: SDG No.: 207100126

Level: (low / med) % Solids: 82.61 Lab Sample ID: 20710012618

Date Received: 10/01/07 Time: 1518 Date Collected: 10/01/07 Time: 1000

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	1990	mg/kg		0.34	3.63	SW-846 6010B	P

FORM I - IN

10/16/07

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL | Sample ID: A-13

Lab Code: LA024 | Case No.: | Contract:

Matrix: (soil / water) Soil | SAS No.: | SDG No.: 207100126

Level: (low / med) | % Solids: 77.91 | Lab Sample ID: 20710012619

Date Received: 10/01/07 | Time: 1518 | Date Collected: 10/01/07 | Time: 1159

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	3310	mg/kg		0.36	3.82	SW-846 6010B	P

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8 10/16/A

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL
Sample ID: F-3

Lab Code: LA024 Case No.:
Contract:

Matrix: (soil / water) Soil
SAS No.: SDG No.: 207100126

Level: (low / med) % Solids: 81.12
Lab Sample ID: 20710012620

Date Received: 10/01/07 Time: 1518
Date Collected: 10/01/07 Time: 1030

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	1050	mg/kg		0.35	3.67	SW-846 6010B	P

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10/16/7

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL Sample ID: D-6

Lab Code: LA024 Case No.: Contract:

Matrix: (soil / water) Soil SAS No.: SDG No.: 207100126

Level: (low / med) % Solids: 81.60 Lab Sample ID: 20710012621

Date Received: 10/01/07 Time: 1518 Date Collected: 10/01/07 Time: 1105

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	547	mg/kg		0.35	3.68	SW-846 6010B	P

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10/16/7

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL
Sample ID: D-4

Lab Code: LA024 Case No.:
Contract:

Matrix: (soil / water) Soil
SAS No.: SDG No.: 207100126

Level: (low / med)
% Solids: 83.65
Lab Sample ID: 20710012622

Date Received: 10/01/07 Time: 1518
Date Collected: 10/01/07 Time: 1027

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	1040	mg/kg		0.68	7.17	SW-846 6010B	P

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10/16/7

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL Sample ID: X-2 (SPLP)

Lab Code: LA024 Case No.: Contract:

Matrix: (soil / water) Soil SAS No.: SDG No.: 207100126

Level: (low / med) % Solids: Lab Sample ID: 20710012623

Date Received: 10/01/07 Time: 1518 Date Collected: 10/01/07 Time: 1143

Analyte	Concentration	Units	C	MDL	PQL	Method	Type	
Lead	0.032	mg/L		0.0018	0.015	SW-846 1312/6010B	P	JK

FORM I - IN

10/16/07

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL | Sample ID: F-8 (SPLP)

Lab Code: LA024 | Case No.: | Contract:

Matrix: (soil / water) Soil | SAS No.: | SDG No.: 207100126

Level: (low / med) | % Solids: | Lab Sample ID: 20710012624

Date Received: 10/01/07 | Time: 1518 | Date Collected: 10/01/07 | Time: 1133

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	0.14	mg/L		0.0018	0.015	SW-846 1312/6010B	P

FORM I - IN

10/16/9

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL | Sample ID: D-8 (SPLP)

Lab Code: LA024 | Case No.: | Contract:

Matrix: (soil / water) Soil | SAS No.: | SDG No.: 207100126

Level: (low / med) | % Solids: | Lab Sample ID: 20710012625

Date Received: 10/01/07 | Time: 1518 | Date Collected: 10/01/07 | Time: 1143

Analyte	Concentration	Units	C	MDL	PQL	Method	Type	
Lead	0.077	mg/L		0.0018	0.015	SW-846 1312/6010B	P	JK

FORM I - IN

10/16/07

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL | Sample ID: G-6 (SPLP)

Lab Code: LA024 | Case No.: | Contract:

Matrix: (soil / water) Soil | SAS No.: | SDG No.: 207100126

Level: (low / med) | % Solids: | Lab Sample ID: 20710012626

Date Received: 10/01/07 | Time: 1518 | Date Collected: 10/01/07 | Time: 1042

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	0.033	mg/L		0.0018	0.015	SW-846 1312/6010B	P

FORM I - IN

10/16/2

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL Sample ID: C-1 (SPLP)

Lab Code: LA024 Case No.: Contract:

Matrix: (soil / water) Soil SAS No.: SDG No.: 207100126

Level: (low / med) % Solids: Lab Sample ID: 20710012627

Date Received: 10/01/07 Time: 1518 Date Collected: 10/01/07 Time: 1000

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	0.12	mg/L		0.0018	0.015	SW-846 1312/6010B	P

10/16/7

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL | Sample ID: F-3 (SPLP)

Lab Code: LA024 | Case No.: | Contract:

Matrix: (soil / water) Soil | SAS No.: | SDG No.: 207100126

Level: (low / med) | % Solids: | Lab Sample ID: 20710012628

Date Received: 10/01/07 | Time: 1518 | Date Collected: 10/01/07 | Time: 1030

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	0.072	mg/L		0.0018	0.015	SW-846 1312/6010B	P

FORM I - IN

10/16/9

APPENDIX E

COPY OF TDD TO-0005-07-08-01 AND AMENDMENT A

EPA

U.S. EPA
Washington, DC 20460

START3
Technical Direction Document

Assessment/Inspections
Activities-Removal Funds (0005)
Weston Solutions, Inc.

TDD #: TO-0005-07-08-01
Contract: EP-W-06-042

! = required field

TDD Name:	Cactus Pipe SPLP sampling	! Period:	Base Period
! Purpose:	Work Assignment Initiation		
! Priority:	High	! Start Date:	08/28/2007
Overtime:	Yes	! Completion Date:	09/28/2007
! Funding Category:	Removal	Invoice Unit:	
! Project/Site Name:	Cactus Pipe	WorkArea:	ASSESSMENT/INSPECTIONS ACTIVITIES
Project Address:		Activity:	Removal Assessment (RA)
County:	Lafayette	Work Area Code:	
City, State:	near Duson, LA	Activity Code:	RS
Zip:		EMERGENCY CODE:	☐ KAT ☐ RIT
! SSID:	06JQ	FPN:	
CERCLIS:	LA0000605278	Performance Based:	No
Operable Unit:			

Authorized TDD Ceiling:	Cost/Fee	LOE (Hours)
Previous Action(s):	$0.00	0.0
This Action:	$15,000.00	0.0
New Total:	$15,000.00	0.0

Specific Elements Provide technical support to EPA on removal assessment activities.

Description of Work:
START 3 shall assistthe OSC in collecting and documenting 3 SPLP samples at locations determined by the OSC on the Site. START 3 shall procure laboratory services for "rush" SPLP lead analysis for said samples.

Accounting and Appropriation Information

SFO: 22

Line	DCN	IFMS	Budget/ FY	Appropriation Code	Budget Org Code	Program Element	Object Class	Site Project	Cost Org Code	Amount
1	RVC014	AHW	07	T	6A00E	302DC6C	2505	06JQRS00	C001	$15,000.00

Funding Summary:	Funding
Previous:	$0.00
This Action:	$15,000.00
Total:	$15,000.00

Funding Category
Removal

Section
- Signed by Warren Zehner/R6/USEPA/US on 08/24/2007 10:38:18 AM, according to Cheng Wei Feng/sta
: Warren Zehner **Date:** 08/24/2007

Project Officer Section - Signed by Linda Carter/R6/USEPA/US on 08/24/2007 03:20:38 PM, according to Cheng We

Project Officer: Linda Carter **Date:** 08/24/2007

Contracting Officer Section - Signed by Tobin Osterberg/R6/USEPA/US on 08/28/2007 07:46:43 AM, according to C

Contracting Officer: Tobin Osterberg **Date:** 08/28/2007

Contractor Section

Contractor Contact: **Date:**

EPA

U.S. EPA
Washington, DC 20460

START3
Technical Direction Document

Assessment/Inspections
Activities-Removal Funds (0005)
Weston Solutions, Inc.

TDD #: TO-0005-07-08-01
Amendment#:A
Contract: EP-W-06-042

! = required field

TDD Name:	Cactus Pipe SPLP sampling	! Period:	Base Period
! Purpose:	Amended SOW, Change Period of Performance, Set/Revise Expenditure Limit		
! Priority:	High	! Start Date:	08/28/2007
Overtime:		! Completion Date:	11/30/2007
! Funding Category:	Removal	Invoice Unit:	
! Project/Site Name:	Cactus Pipe	WorkArea:	ASSESSMENT/INSPECTIONS ACTIVITIES
Project Address:		Activity:	Removal Assessment (RA)
County:	Lafayette	Work Area Code:	
City, State:	near Duson, LA	Activity Code:	RS
Zip:		EMERGENCY CODE:	☐ KAT ☐ RIT
! SSID:	06JQ	FPN:	
CERCLIS:	LA0000605278	Performance Based:	No
Operable Unit:			

Authorized TDD Ceiling:	Cost/Fee	LOE (Hours)
Previous Action(s):	$15,000.00	0.0
This Action:	$16,000.00	0.0
New Total:	$31,000.00	0.0

Specific Elements Provide technical support to EPA on removal assessment activities.

Description of Work:
Amendment A: This amendment increases funding by $16,000 and extends the due date until 11/30/07. This amendment is necessary to collect and analyze additional Pb and SPLP samples from the site to resolve clean up action levels and removal completion level concerns from LDEQ. START3 shall coordinate with the OSC on the sampling location for an additional 20 samples for Pb analysis and an additional 5 SPLP samples. START3 shall procure appropriate lab services and complete a QA/QC review for said samples.
START 3 shall assistthe OSC in collecting and documenting 3 SPLP samples at locations determined by the OSC on the Site. START 3 shall procure laboratory services for "rush" SPLP lead analysis for said samples.

Accounting and Appropriation Information

SFO: 22

Line	DCN	IFMS	Budget/ FY	Appropriation Code	Budget Org Code	Program Element	Object Class	Site Project	Cost Org Code	Amount
1	RVC023	AKF	07	T	6A00E	302DC6C	-	06JQRS00	C001	$16,000.00

Funding Summary:	Funding
Previous:	$15,000.00
This Action:	$16,000.00

Funding Category
Removal

Total:	$31,000.00

Section

- Signed by Warren Zehner/R6/USEPA/US on 09/24/2007 08:58:39 AM, according to Cheng Wei Feng/sta

: Warren Zehner **Date:** 09/24/2007

Project Officer Section - Signed by Linda Carter/R6/USEPA/US on 09/24/2007 01:30:44 PM, according to Cheng We

Project Officer: Linda Carter **Date:** 09/24/2007

Contracting Officer Section - Signed by Tobin Osterberg/R6/USEPA/US on 09/24/2007 01:22:41 PM, according to C

Contracting Officer: Tobin Osterberg **Date:** 09/24/2007

Contractor Section

Contractor Contact: **Date:**